

MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade Name Registered in the U. S. Patent Office.

VOL. LXII. No. 17.
WEEKLY.

BALTIMORE, OCTOBER 31, 1912.

\$4.00 A YEAR.
{ SINGLE COPIES, 15 CENTS.

Manufacturers Record

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.,
BALTIMORE.

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New York—52 Broadway.
Boston—613 Old South Building.
Chicago—1116 Fisher Building.
St. Louis—543 Century Building.

Subscription, \$4 a year
(payable in advance) to United States,
Mexico, Cuba, Porto Rico, Hawaii and
the Philippines.

To Foreign Countries (including Canada) in
the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as sec-
ond-class matter.]

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AWAITING A CALL TO WORK.

Reference was made in the MANUFACTURERS RECORD some months ago about a chair-making industry at Tryon, N. C., in which the workmen are natives of the mountain regions, who have inherited the art of chair-making from ancestors who brought their knowledge from England in the seventeenth century. Ralph C. Erskine of Tryon, who has established a plant for the manufacture of high-grade chairs at that point, makes the statement that these chairs are built to last a hundred years without a drop of glue or a scrap of metal being used in their manufacture. Many of the parts are made by the mountaineers, the Erskine company having merely provided the workmen with better tools, better models and more artistic ideas for the making of these chairs. In a letter to the MANUFACTURERS RECORD referring to the matter, Mr. Erskine says:

There are just enough young men who show a really remarkable talent to counterbalance the depressing effect of the pitiful ignorance of the many who come and try. It is really pitiful to see the disappointment of some of these young men when we cannot keep them. If we could afford it, it would be the finest thing in the world to be able to keep them on and give them real instruction, but that is of course impossible. There are a number of lads who are learning the French Polish and seating, who will later make good men at the bench, and this whole game is a long one, so we look ahead to these.

The Appalachian Mountains are full of young men who, like those mentioned by Mr. Erskine, are longing for an opportunity for work and development. Much of that magnificent region, unsurpassed, if equaled, elsewhere in the world, holds what may be called an arrested people. The population a century or more ago was very nearly on a par with the rest of the country, but,

while the world touched by railroads and other modern improvements has been making marvelous advance, while educational influences have brought about a higher development of the people of other sections for work, for broadening their knowledge and increasing their wealth, a very large proportion of these mountain people have been cut off from the opportunity of employment denied to thousands of people living far away from railroads and other modern advantages. And so they have stood where their forefathers stood more than a century ago. Many of these people by inheritance have unusual natural abilities, just as in the cases mentioned by Mr. Erskine. In that particular locality, for more than a century, generation after generation, some of these mountain people in their primitive homes have been making chairs that are strong, serviceable and durable. They are made with primitive facilities and with few tools.

Out of this mountain region that stretches from West Virginia to Northern Alabama, like swarming bees out of the hive come many thousands of men and women seeking employment. They have turned to the cotton mills of the Piedmont region and to the wood-working industries of the same section. They have gone wherever employment offered. Some of them are inefficient. Some may never be able to master a profitable trade, but thousands of them are proving the inherent strength of character and ability which they possess. Out of that mountain region have come many of the really great men of the South—men who today in the pulpit and in other places are noted for their pre-eminent ability. Many of the foremost ministers in the South, men of commanding power and of national influence, were born in this mountain region.

In the people of the mountain country, that is, the natives, the people back in the mountain coves cultivating here and there a little patch of land, those up on the mountain sides who are yet among the backward, the arrested people of the Appalachian range, the South has an asset of national importance. The potentiality of these people is greater than the potentiality of the mountain region which they inhabit, burdened as it is with mineral wealth and covered with virgin timber. Every manufacturing enterprise like this chair factory or other industrial undertaking, every railroad that is built through that region opening up the country and broadening the opportunities for employment, will of necessity do a great work for the advancement of men while increasing the wealth of that section. Rich as that mountain region is in almost limitless mineral resources, it is richer yet in the possibilities of the people who inhabit it, and in this we, of course, refer to the class known as the natives, who are as yet to a large extent unschooled and untrained.

HOW TO INCREASE THE WEALTH AND BUSINESS OF THE SOUTH.

To every man interested in the South,
Whether he be native born or whether he is in the South by choice
rather than by accident of birth.

Whether he be an investor in the South from other sections, or whether
he is seeking to interest capital from other sections in the South,—

The South is a vast mine of wealth. Its resources are unmatched by those of any other like area in the world. Nowhere else is there to be found a region of such vast and varied potentialities for agriculture, for manufactures, for mining, for railroad operations, for city building activities. But limitless as these resources are, they can produce nothing of value to the individual, to the State, the section or the nation until they be utilized.

Millions of acres of uncultivated land producing nothing for the good of mankind without settlement, and millions of acres of overflowed and cut-over timber lands as they stand today idle, useless, indeed repellent to the traveler, are a liability to the South, because they are a burden to carry, yielding nothing in return. Utilized, these lands would become one of the South's great assets, adding billions of dollars to the wealth of this section and the nation.

Millions of acres of land, poorly tilled by reason of incompetent and thriftless tenant farmers, yield only a small proportion of the returns which should be received from them. They are an asset, but they are only partly utilized.

Billions of tons of coal and iron ore can produce no wealth and no employment until the miner's pick touches them and quickens them into wealth-producing assets.

And so all along the line it might be said of the South that this vast storehouse, this great deposit of natural resources, is but touched here and there, yielding large results in the aggregate, it is true, but results which are triflingly small as compared with the possibilities of the situation.

It would not be a difficult matter to double the aggregate output of the farms of the South, giving a total to this section of \$6,000,000,000 against \$3,000,000,000 at present.

With adequate work on the part of the people of the South, those to the manner born, as well as those who have come by choice rather than by the accident of birth, by the railroads and other great corporations whose interests are centered in this section, the whole wealth of the South, its industrial, mining, railroad and agricultural interests could be doubled within a very brief period to the vast benefit of this section, of the nation and of the world.

Are the people interested in the South, those who are living here, those whose money is invested here, and the great corporations whose millions have been put into this section, equal to the opportunity?

Are they of sufficiently broad vision to see how every step of progress made by every industry benefits all?

Are the iron and coal men broad enough to see that the increase of population, the betterment of farm conditions, the extension of railroad activities, are vitally important to them as enlarging the home demand for the output of their furnaces and mines? Do they realize that every new wheel that turns on rail or in factory in all the South is a matter of vital, direct concern to their own business affairs?

Are the city builders and the owners of city property awake to what it would mean to double the wealth of the South by the fullest utilization of its vast potentialities? Do they comprehend that every new settler in the South, every acre of land whose output is improved by better farming means enlarged value for their properties and broader opportunities for their sons?

Are the railroad men who represent the hundreds of millions of dollars invested in the railroads of the South quite appreciative of what it would mean to their interests to see the output of the mines, the factories and the farms of the South doubled?

It is entirely possible to bring this about. Are they men of sufficient vision to realize how promptly this could be done with the right kind of campaign?

The man who had a thousand acres of the richest soil which could by energy be properly cultivated and made to yield a fortune every year, and who yet lacked the vision or the energy to cultivate more than one-tenth of it, would be classed as incompetent and unworthy of such a possession. But he would be doing only what the South as a whole and the people interested in the South are doing. The opportunity which this section offers for broader work, for expansion of every interest, is at least ten times as great as what is now being done.

If the South is to come into its own, if the millions of idle acres are to be turned from a liability into an asset, if the home demand for iron and coal is to be so increased as to make a ready market for all the product of all the furnaces and mines of this section, if better farming methods are to be made general, if cities are to grow more rapidly and become more beautiful, then the people of the South of all classes, professional men, merchants, manufacturers, farmers, railroad people and all others, must work in unison and work on a far broader scale with far greater energy and with a far more liberal expenditure of brain and capital power than at present. Great things are being done, but ten times greater things could be done.

Are we equal to the opportunity given, or is the opportunity so far beyond the measure of our energy and our ability that standing appalled at its magnitude

we fall short of the situation and fail to measure up to the responsibilities placed upon the South by the fact that it is a region of such boundless wealth of resources, climate, soil, minerals, timbers and water-powers?

BIG DEVELOPMENT OPERATIONS TO LEAD IN UPBUILDING SOUTH.

The \$55,000,000 Alabama Interstate Power Co., financed by strong English bankers, whose plan of operations in Alabama has heretofore been detailed in the MANUFACTURERS RECORD, is actively pushing its construction work and laying the foundation for bringing into Alabama additional industries to consume the power which it will generate. The chief office of the company is now being transferred from Montgomery to Birmingham, and Mr. W. W. Freeman, the managing director, in an interview with the Birmingham papers a few days ago emphasizing the points previously made in a special interview with Mr. James Mitchell, the president of the company, which appeared some months ago in the MANUFACTURERS RECORD, indicated that he is as enthusiastic about Alabama and its future development as is Mr. Mitchell. Mr. Mitchell, though an American by birth, has spent some years in Europe in connection with large financial and industrial operations financed from London with which he has been intimately identified and associated with some of the foremost banking interests of that great money center. This company controls about 400,000 available horse-power in Alabama, and is now developing about 50,000 horse-power. It proposes to continue its development work as rapidly as the market can be created for the power, until it has fully utilized the vast amount which it owns. In discussing these points, Mr. Freeman said:

We know from minute and exhaustive examination that the field of consumption is here. We can sell the power, but nothing can be done until we can get the stuff to sell. The manufacturing companies that are here now operating and not using electricity for power must be shown by our company that it will be to their best interests to cease using coal for steam and use electricity before we can get their business; and that one fact of our competing with coal, which is a remarkably cheap fuel here, indicates that our prices will be an inducement to manufacturers.

Our company is building properties that will last and which are to be the very latest construction in the several lines that we will utilize. Our construction will be designed to produce electric power on the cheapest scale possible. Every item of our construction will be modern. For the sale of our commodity it may become necessary for our company to bring to this district certain manufacturing enterprises. In that work will be put forth our strongest efforts when the time is proper for that effort. We will have a tremendous amount of power for sale, and while we will use some of it ourselves, we will have a large volume which will be marketable. Our aim in bringing to this district manufacturing enterprises will be to get the best that can be procured, and will to that extent assist Birmingham and Alabama in growing bigger and more prosperous as the years pass.

One of the developers of very large power interests in the South some days ago expressed the fear that this section was creating a larger amount of hydro-electric power than could be profitably utilized. His view would be correct if his company and others should sit down and do nothing but wait for the coming of industries to consume their power. Mr. Freeman takes the right position, viz.: that his company must take an active part in bringing into the district industries to consume the power which they propose to generate.

A few weeks ago, just before sailing for Europe, Mr. Mitchell stated to the

MANUFACTURERS RECORD that he was then in correspondence with a German chemical manufacturing company, whose product is not made in this country, who were negotiating with him for an aggregate of 40,000 horse-power, with a view to the establishment of a great enterprise in Alabama. It is altogether probable that while in Europe he is devoting much of his time to broadening the knowledge of European manufacturers as to the resources of the country in which his people are making such great investments. Financed as this company is by strong English houses not identified with any other water-power interests in the South, but tremendously impressed as they are with the vast potentialities of this section, they will inevitably become active promoters of development work in the South. They will go out after manufacturing enterprises in this country, on the Continent and in England, and awaken a still greater interest in the resources of the South for industrial operations. If the other water-power companies operating in the South and the other institutions identified with its development and who are putting the money of their clients into this section will follow the same broad policy, there need be no fear that the hydro-electric operations now under way will exceed the demand for power. Moreover, if the public utilities which to so large an extent are controlled by great banking houses in the North and West (and, by the way, the Alabama Interstate Power Co. owns many of the public utilities of that State) are so managed as to make them active factors in bringing people and industries to the South, the many millions that have within the last few years been put into these interests by outside capitalists will be abundantly safeguarded. The great financial interests, representing water-powers and public utilities, and the domination of Southern railroads, must, however, recognize their responsibility to the section in which their money is invested, as well as to their clients, and with this in view become the leaders in attracting the attention of the world to the resources of the South. We are glad that Mr. Freeman confirms so strongly the suggestion to this effect made to the writer some months ago by Mr. Mitchell, when his company was beginning its operations in Alabama. Evidently this view of their responsibility and opportunity has been taken by all of the leading officials and financiers identified with that organization.

OPTIMISM IN IRON AND STEEL.

Optimism in the iron and steel trade of the country, based on actual conditions as they exist, radiated throughout the meeting of the American Iron and Steel Institute at Pittsburgh last week. The story as told in this issue should be studied by every reader of the MANUFACTURERS RECORD. The facts regarding the prosperity of the industry are of interest to everybody, but there are many other facts presented regarding the training of salesmen, the ethics of the relation between buyer and seller, and other things which will be found of interest to every business man, regardless of whether he may be directly connected with any of the varied ramifications of iron and steel or not.

BIG ROAD-BUILDING SUGGESTIONS.

Florida papers report that Senator Stringer of that State will at the next session of the Legislature introduce a bill for bonding the State for \$50,000,000, the money to be devoted entirely to the building of vitrified-brick roads throughout Florida. Under this proposed bill, if it should be passed, main highways would be constructed from Jacksonville to Miami, from Jacksonville to Pensacola, from Jacksonville to Tampa, and from Tampa to Fort Myers, with branch roads connecting every county-seat in the State with the main highways.

For a State of Florida's population this is a very bold project. A bond issue of \$50,000,000 in a State whose population is considerably less than 1,000,000 would at first blush seem to be a rather venturesome undertaking, but the more it is studied the more merit will be found in the proposition. A system of highways such as is proposed by this bill would have no parallel in the country. It would immediately mark Florida as the most advanced State in the Union in the construction of good roads and would set the pace for every State in the Union.

That good roads are essential to material advancement, that their construction enhances the value of the property tributary to them to a greater extent than the entire cost of their building, that they add to the happiness and prosperity of the communities through which they run, enlarge business operations and increase the profits of farmers and city people alike, are all universally admitted. No one today attempts to question the almost supreme importance of good roads in the up-building of a State, in material things as well as in educational and religious activities. Of what avails the building of schools and churches in country districts if for a large portion of the year impassable roads make attendance almost impossible? Who can wonder at the drift from the country to the city when the impassable, bad roads of the country districts are contrasted with the good streets and paved sidewalks of the city? Until the country district is to some extent placed on a par with the city in the question of highways and the ease of getting around, the trend of population from the country to the city will inevitably continue.

In many ways Florida is peculiarly advantageously situated to undertake so broad a project as Senator Stringer proposes. It is a State of almost limitless potentialities, whose attractions to the health and pleasure seeker are so great that even as matters now stand the railroads and hotels of Florida will be constantly taxed to meet the increasing tourist business during the winter season. The construction of such a system of highways as is proposed would make Florida the most popular State in the Union for the motor tourist through at least five or six months of the year. When such roads have been constructed the State will be so crowded with motorists seeking its balmy health-giving winter climate and enjoying its semi-tropical vegetation that the traveler over these roads will scarcely ever be out of sight of a motor car. With its ability to attract the winter tourist, Florida has an asset as great as would be vast deposits of coal or iron ore or other minerals. As Alabama is utilizing to its broad development its asset for iron and steel making, so Florida should to the utmost extent utilize its asset of

climate. This is an asset of great potential value to the State; indeed, to the whole country, for there is only one Florida.

Increasing wealth and population of the United States will every year add to the number of people who seek to escape the rigors of the Northern and Western climate in the more balmy air of the South. Throughout a large part of this section, from the mountains of Western Carolina, the splendid resort regions of the central piney-wood sections of the South, on down the Gulf Coast to Brownsville, Texas, there will be an ever-increasing winter-tourist business. Tens of thousands will travel South for health and pleasure in the coming years for every thousand that go now. The State which provides the amplest facilities for the comfort and pleasure of these travelers will have the call on the largest share of the business. If Florida should lead the way in this magnificent scheme of road building, it would stimulate the entire South, and the beauty of it all is that the enhancement in the value of property following such comprehensive road-building work would far exceed the cost. A suggestion has been made in Alabama that that State should issue \$50,000,000 of bonds for road building. These plans, though possibly in advance of the sentiment of these States at the moment, will set the people of Florida and Alabama and other States as well to a careful study of the road-building question.

ACTIVITY IN SOUTHEAST MISSOURI.

Writing about the business activity in Southeast Missouri, S. S. Barnes of the Marston Realty Co., Marston, Mo., says:

Southeast Missouri is making wonderful strides in improvement. It is being leveed and ditched and put in cultivation faster than any other section of the country that I know of in the United States. You will note also the National Highways Association has approved a north and south road directly through Southeast Missouri. Our towns have awakened to the spirit of road improvements. The Sikeston neighborhood has bonded itself for about \$100,000 for the purpose of improving about twelve miles of this national highway. By connecting up with some forty-odd miles it will make a splendid road to New Madrid. The line will be carried to Memphis. Thence to New Orleans. Then this national road will have passed through one of the most fertile valleys in the world.

In the same letter Mr. Barnes says:

Enclosed find St. Louis exchange in payment for one year's subscription to the MANUFACTURERS RECORD. We find that the MANUFACTURERS RECORD is one of the most valuable and best-informed magazines and represents the great diversified interests of the South better than any magazine that we know of. We have been a subscriber to it for about fifteen years.

A SOURCE OF INSPIRATION.

T. P. Bell, president of the Columbia Finance Co. of New Orleans, La., under date of October 22, writes:

I find I shall need some ten to fifteen copies of the (paper binding) Thirty Years of Southern Upbuilding edition of February 22. If you have on hand as many as one dozen such copies, please forward them to us at once, with bill to cover. The MANUFACTURERS RECORD is a constant source of inspiration, and the Thirty Years of Southern Upbuilding has been particularly helpful and inspiring in espousing the cause of the South and in the effort to contribute something of a constructive character to the development of this section.

It is quite likely we shall need from twenty-five to fifty copies of "The South: The Nation's Greatest Asset."

Mr. Bell's letter is an illustration of how "Thirty Years of Southern Upbuilding" is still doing its work of up-

building the South. We believe that our coming publication, "The South: the Nation's Greatest Asset," will not only help to crystallize the influences originated for Southern development by "Thirty Years of Southern Up-building," but that it will prove far more interesting and accomplish far more than the last-named publication.

PRICE-CAMPBELL COTTON PICKER

In reply to an inquiry as to his views on the feasibility of the Price-Campbell cotton-picking machine, Chairman Henry Walters of the Atlantic Coast Line Railway wires the MANUFACTURERS RECORD:

"Have satisfied myself practically that Price-Campbell cotton picker effectively picks the cotton without injuring unopened bolls or blooms. Am also satisfied machine-picked cotton slightly better in quality and less left on seed than hand-picked. Am trying to inform myself, but not yet personally qualified to give an opinion as to questions of economy, cost, durability and other uses for the machines."

THE B. & O. R. R. AND ITS WORK.

The Baltimore & Ohio Railroad is widely distributing throughout the city an attractively-printed pamphlet of its "Baltimore Passenger Terminals." The facts presented are interesting and the illustrations are attractive.

The energy with which the Baltimore & Ohio Railroad during the last year or two has been developing its passenger traffic, as well as its freight business, is worthy of all commendation. Many years ago that road got into bad repute as a passenger railroad. Its then managers had failed to keep the road and the rolling stock abreast of the times. But since those days many millions of dollars have been expended in perfecting the physical condition of the road and enlarging its facilities for handling freight and passenger traffic. The men now responsible for its management are giving to the country tributary to this line one of the most splendidly constructed and equipped railroads in the country. They are, moreover, developing among its force an esprit de corps and an attention to the little things as well as the big things which add to the comforts or the discomforts of travel. And they are taking at the same time a very broad view of their relation to the development of the country tributary to them. The people of Baltimore have hardly awakened to a full appreciation of these changes in methods, in management and in physical condition, nor have they quite grasped what the Baltimore & Ohio, as it now is, means to the progress and prosperity of this city. Not on sentimental grounds, though that always counts for something, but on the business basis of what it is and what it is doing, the Baltimore & Ohio Railroad has a right to enlist the active co-operation of the traveling public and the business men of Baltimore, as well as of the general country tributary to this line. Wherever a passenger or freight car of the Baltimore & Ohio is seen throughout this country it is a reminder of Baltimore. This fact should be appreciated and its importance understood, for it means a great deal in reminding millions of people of Baltimore and the relations of the Baltimore & Ohio Railroad to this city. The expansion of the Baltimore & Ohio in any direction inures directly to the benefit of Baltimore. The development of the country tributary to that road, and to this the officials of the Baltimore & Ohio are giving the most active and intelligent co-operation, means added prosperity to Baltimore. It is not out of place to suggest that these facts should be appreciated by the people of Baltimore.

American Iron and Steel.

FEATURES OF THE PITTSBURGH MEETING OF THE INSTITUTE.

[Special Correspondence Manufacturers Record.]

Pittsburgh, Pa., October 26.

The third general meeting of the American Iron and Steel Institute, though nominally holding sessions through yesterday and today, really completed its work yesterday, today being given over to visits by such members as cared to remain over to various manufacturing and other establishments as they individually desired to examine. The sessions of the Institute yesterday were attended by several hundred members, embracing some of the men best known to the country in connection with the iron and steel industry, and many others less known to the people generally, but perhaps no less important in their relations to their business.

A most noticeable thing about the personnel of the gathering was the apparent youthfulness of so large a number of the members, and especially of those who read papers upon the various phases of iron and steel making and their allied interests. Several of these latter gentlemen must be on the enviable side of thirty, and a number of those mentioned as best known, and who hold the prominent places in the big establishments, are still facing and traveling toward life's meridian. Many of these young men have been both educated and trained to their business, and are capable, therefore, of bringing to bear in their various relations to it not only the best of technical skill, but the best also of scientific knowledge. These things show that the iron and steel business in this country is to be carried on in the future by men who deliberately and intelligently prepare themselves for it, with the intent to make it their lifework, and to devote to it the same enlightened thought that men are accustomed to regard as belonging exclusively to what are termed the learned professions. They mean also that the men who make a profession of the iron-making business will be fully equipped to grapple with other problems of citizenship, to maintain themselves in the discussion of those questions of public import hinted at by President Gary in his opening address.

Two features of the meeting that stood out in relief were the entire frankness with which matters relating to the business of the members were treated in the various discussions, and the absence of any remarks that might have a political bearing. It seemed as though each man who read a paper was perfectly willing for every other man to have the full benefit of his knowledge and experience; that there was no such thing as business jealousy; that there was a most cordial feeling between the United States Steel Corporation interests by the uninformed, supposed to be bent upon destroying all independent concerns, and the representatives of the concerns which it is supposed to wish to destroy. The freedom from all mention of politics, even so much as to say that business was being affected by the current campaign, is evidence that this great interest, supposed to be the one earliest to note the approach of financial danger or business depression, has reached a place out of reach of the real or fancied influence of politics. In fact, the only reference to politics which I heard from any man in attendance upon the meeting was the remark that the iron and steel business had reached a point of safety beyond danger from political changes.

There was on all sides an exuberant expression of optimism with respect to business, present and to come. The gen-

eral feeling was expressed by President Farrell of the Steel Corporation when he said to me, in reply to a request for an expression upon the condition of the iron and steel business:

"I haven't time to prepare an interview, but you can say for me that business has never been better than now. From present prospects it will be good for 12 months. No man ought to be willing to prophesy for a longer period. Along those lines you can make a statement as strong as you like, and I will stand for it."

Judge Gary, when asked for an expression upon business conditions, referred to the statement in the opening portion of his address, saying it stated his views as well as he knew how to state them. What he said was:

"We are in the midst of an era of prosperity never before surpassed as far as it affects our particular lines. Conditions have not resulted from the application of political policies or efforts, but in spite of them. They are here because nothing could prevent."

"Would the election of any candidate make any difference in the present condition of the steel business or the general welfare of the country?" asked a bystander.

"I cannot answer that question," Judge Gary replied. "I cannot talk politics at all."

"Business has never been better in all my experience," was the terse way in which J. G. Butler of Youngstown put it.

"Present business is satisfactory in every respect, and the outlook for a continuation of present conditions is excellent," said Ward W. Jacobs of Hartford, Conn., president of the Shelby Iron Co., Shelby, Ala.

"The fly in the ointment just now is the inadequate car supply," said Mr. Wolfe of the Cambria Iron Co., Johnstown, Pa.

"Well, I'd rather have plenty of orders and few cars than plenty of cars and few orders," quickly responded Mr. Hatfield, New York manager of the American Bridge Co. "I'm not going to rail against the car supply with business like it is now."

"I can't see how conditions could be better," said E. G. Grace, vice-president and general manager of the Bethlehem Steel Co. "The mills are stocked with orders that will keep them running to capacity for months, and prospects are bright for a continuance of these conditions for some time to come."

A score of others declared the same views, couched in different language. The feeling of optimism seemed to be unanimous, confidence in a continuation of present business conditions all-pervading. These things were gathered during the periods when the Institute was not in actual session, and the members were "standing at ease," as it were.

Judge Gary's Address.

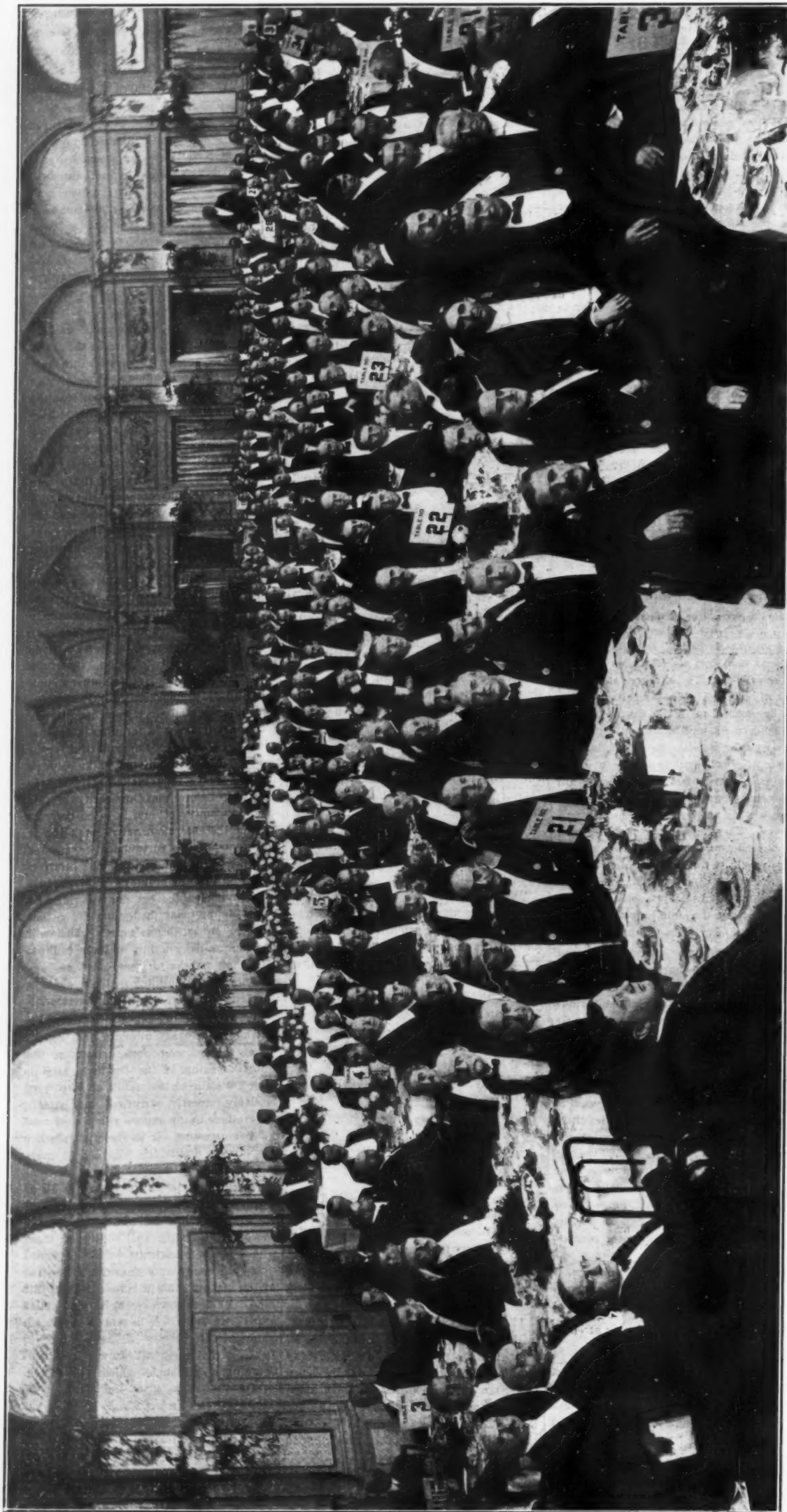
The sessions of the Institute were held in the banquet hall of the Schenley Hotel, beginning shortly after 9 o'clock Friday morning, and were presided over by Judge Gary, the Institute's president. In opening the morning session Judge Gary read the following paper, which held the attention of the meeting and was greeted with warm applause at its close:

"The city of Pittsburgh is an appropriate place for this meeting. It is the center of the iron and steel industry of this

country, and in this line of business activity its influence is felt in every country of the world. The Pittsburgh district, confined to the city and its immediate surroundings, produces about one-third of the iron and steel manufactured in the United States and about 13 per cent. of the total production of the world. With its natural advantages and location, which tend to reduce the general cost of assembly, production and distribution to the minimum, it is safe to conclude that in the future, as in the past, its commanding position as a steel center cannot be questioned. Much might be said, and would be said if time permitted, favorable to the reputation and active strength of this great city concerning all that makes for the betterment of the human race.

"And we are here under conditions that are most gratifying. We are in the midst of an era of prosperity never before surpassed so far as it affects our particular lines. These conditions have not resulted from the application of political policies or efforts, but exist in spite of them. They are here because nothing could prevent. In the first place, for the last few years, following the bankers' panic of 1907, there has existed a feeling of uncertainty and a lack of confidence, which have deterred the great purchasing public from entering the market, even to the extent of supplying their necessities. This has been especially true of the railroad companies, who are amongst our largest patrons. In consequence, the necessities of the consumers have piled up to such an extent that they have lately been forced to increase their purchases materially. When, therefore, the railroad companies and others similarly situated commenced to buy, the general influence and effect were immediately felt, and buying on a large scale has developed. Moreover, the bountiful crops and sound basic conditions of the country have made everyone realize more clearly than ever before that prosperity in this splendid country of ours is to be the rule and not the exception, notwithstanding at times we may be surrounded by adverse influences and unwarrantable interference, which in any ordinary country would bring prolonged distress and suffering. So we are happy today in the knowledge that we have on our books orders which will keep our mills running to their full capacity for months to come. Let us hope and pray that nothing shall be done to interfere with our continental success.

"We have for the day a program which will afford us great pleasure and benefit. Those of you who were present at the annual meeting of the Institute held in New York during the month of May were probably greatly surprised and greatly entertained by the papers which were read on that occasion. It is doubtful whether any similar institution ever held a meeting at which so many addresses of equal merit were delivered. It seemed to all of us present that so long as we could boast of a membership including men of the character, learning and ability of those who spoke, our Institute could be depended upon to occupy and maintain a position of the highest rank in associations of this kind. I am sure we are to have a similar experience today. It is safe to say in advance of the delivery of the addresses to be made that they will show a breadth of learning and thought which will demonstrate that this great industry in the United States is in charge of men who are fully competent to compete successfully with the learned and skillful men of other nations, all of whom are our friends and yet are most vigilant and successful competitors. It is a great honor, and certainly a great pleasure, to be a



MEMBERS OF THE AMERICAN IRON AND STEEL INSTITUTE AT THEIR BANQUET AT PITTSBURGH.

member of this Institute and associated with such men.

"But neither the technical questions connected with, nor even the material growth of, our business should be treated as the all-important, or the most important, subjects which must be considered and passed upon by the members of the Institute. Questions of great magnitude and concern are at present agitating the minds of the people throughout the world. We may be stubbornly oblivious to some of them, but we ought not to be. We refuse to consider, or at least postpone consideration of, many of them. The questions are international, national and domestic, and they involve the welfare of everyone. We are disposed to wrap around ourselves the cloak of self-righteousness; or we proclaim that we rely upon the stability of government or the majesty of the law; and we consider ourselves safe, whether within our vision everything seems to be calm and tranquil, or otherwise. We sometimes forget that it is the masses of the people who determine final results; that they may establish and abolish governments; that they may make and unmake constitutions. Sooner or later they bring about conditions satisfactory to them, even by resorting to destructive measures. They have the might and they can determine for themselves what is the right. They believe in the sentiment, to quote from a French writer on French history, that 'There is a bigotry in politics as well as in religion, and it is the worst of bigotry to reject change as something which is inherently bad. Laws, to be permanently useful, must vary with the varying conditions of man.'

"I am dealing in generalities, not intending to be specific or to make personal reference. The thought I would leave with you is that there is no way of permanently settling any great question involving the welfare of humankind except on the basis of right and justice. Position, wealth, influence, laws are helpless as a means of establishing a rule for human conduct unless supported by principles of justice and righteousness. The unfair or unreasonable or dishonest man, whether in public life or private life, may succeed temporarily; but it is only a question of time when he will be discovered and overthrown. The members of this Institute have, and will continue to have in an increasing measure, great influence in the solution of the problems of today and the future, and you will give good account of yourselves. In our daily walk and conversation, in our attitude and demeanor toward all with whom we come in contact, each of us must be certain he is governed by motives which are honorable and just. You have made and are making great strides in the direction which I have indicated. You have secured and will hold the respect of all who know you, and, better than that, you have the approval of your own conscience."

Buyer and Manufacturer.

The second address was by John L. Haines, assistant to the president of the Jones & Laughlin Steel Co., Pittsburgh, his subject being "The Buyer, from the Standpoint of the Manufacturer." Mr. Haines said in part:

"The buyer and seller represent two extremes of business. The words of description are not so different. The buyer wants the best for the money—the manufacturer wants money for the best. The one offers money for material, the other material for money. Now, while there is this big distinction between the man who buys and the man who sells, the basic foundation may not be so different. The good buyer is so on account of his training—added to his ability—and we can but think that

the man whose training has made him a successful buyer would have been a good manufacturer had his lifework been along that line. There are, no doubt, inborn traits particularly adapted to certain development, but it is chiefly environment and training that make one man a buyer and another a manufacturer.

"Many of the indictments against the buyer are exceptional, and the same can be said of counter charges against the manufacturer. There should, must be and is a plane on which buyers and manufacturers can meet and do business in comfort and satisfaction. It is the plane of fair dealing. A few thoughts may aid us to reach this plane. Summarizing some of the ideas already expressed, let the buyer suit his exactions to the necessities. Let him not demand the impossible, or even unnecessary. Contract obligations should be respected by both buyer and seller, and should be so written as to be fair to both. All orders and contracts should be as brief as law and sense will allow. The best firms today usually have the simplest forms. Never, however, should clearness be sacrificed for brevity. One of our famous editors of years ago gave orders to his force concerning certain words that must never appear in his paper. The buyer of today should issue similar instructions regarding the use when writing orders of short-cut phrases, such as, as usual and the same as before. Such terms should never appear on orders. If necessary to refer to previous details, the reference should be specific, not general.

"In meeting buyers the salesman is usually the manufacturers' representative, and much effort has been expended to educate the young salesman. The importance of the salesman's training is self-evident, as an inexperienced salesman will frequently do more harm than the proverbial bull in the china shop. The buyer also needs special training. If it is wise for the salesman to know how what he sells is made and to be used, it is as wise for the buyer to know not only how what he needs is to be used, but in a general way how it should be made.

"There are several suggestions to be borne in mind by the manufacturer. Quality is of pre-eminent importance. No high-grade concern can afford a reputation of deliberate inferiority. There may be different grades of material, but given the grade, no manufacturer should be satisfied except when making quality equal to any of the same grade.

"Then there is the element of efficient service. In many products of America the tonnage figures are almost awe-inspiring. Satisfactory and efficient work in filling orders is of prime importance, and it is being learned that efficient service can be rendered without sacrificing production.

"Buyer and seller are, after all, a species of Siamese twins. One cannot exist long without the other. They are as necessary to each other as capital and labor. Just as surely as labor cannot exist without capital, or capital succeed without labor, so surely are buyer and seller dependent on each other. Much advantage to both can be gained by mutual knowledge of the real conditions governing the requirements of the buyer on the one side and on the other the limitations of the seller or maker in meeting these conditions in a commercial way. Matters are at their best when buyers are content and manufacturers busy. The strongest factor to bring about and maintain such conditions is fair dealing. The best buyers today are square in their dealings, and continued success of a manufacturer can only be achieved by maintaining a like attitude.

"Thus from either standpoint it can be demonstrated that 'honesty is the best

policy.' With this great principle ever before us, let fairness be our watchword, efficiency our aim, perfection our goal."

Training Salesmen.

The sound practical sense and good advice contained in Mr. Haines' paper were evidently approved by those who heard it, and it was received with every manifestation of appreciation.

Possibly no paper of the numerous excellent ones read elicited more interest than that of James M. Camp, of the general sales department of the Carnegie Steel Co. Mr. Camp's subject was "The Technical Training of Salesmen," and he treated it from the standpoint of his experience with the school for salesmen maintained by his company. He spoke first of the old haphazard style of instilling knowledge of the business into the men who were expected to secure orders for the mills, and then told how much better and more easily that knowledge is now imparted, as follows:

"In the past, when a salesman showed an inclination to broaden his learning or to specialize along some particular line, the usual procedure was to bring him to this district and to let him roam at will through the works or mill that particularly interested him, without, as a rule, any person to guide or instruct him. The results of this procedure were so unsatisfactory and the need for a better plan was so apparent, that in the summer of 1911 the president of the Carnegie company appointed a committee to report upon a more feasible means of carrying on, in a broad and systematic manner, this educational work.

"In the effort to solve the problem an experimental school for salesmen was established, a school that, with the experience of one year, now rests upon a firmly-established basis. It is not a school to teach salesmen how to sell; none but salesmen should be employed for that purpose. The school is designed to show the salesman how iron and steel and their products are made, to familiarize him with the material he sells, to illustrate to him the painstaking care that is continuously being exercised in the various processes of manufacture in order to insure a commercial product of the highest quality, to show him wherein his product excels that of his competitor, and to furnish him with convincing arguments that such is the case. The school is made up of salesmen gathered together from our agencies in all parts of the country. As practically all of these men are without technical training, the course must, of necessity, be made as simple as possible, giving the theoretical side of the various processes of manufacture in the plainest language in order to insure understanding.

"The greater part of the time is spent in the furnaces and mills of the various plants of the company. The first few days are devoted to the general principles of the manufacture of iron and steel, with a study of metallurgical and chemical terms in order to familiarize the student with their uses. Following this comes a treatise on the foundation of the industry, the Lake Superior iron ores, giving a description of the commercial grades, the different ranges, with particular attention to the Mesabi field from which the greater part of our product is derived. The differences in the three types of mining—open cut, milling and underground—are shown, and the distinction between basic and Bessemer ores is made clear."

Mr. Camp then sketched carefully the progress of the student through the transportation department, coke-making, blast-furnace operation and mills, going even into the working of various specialties,

such as steel wheels, gear blanks, sheet piling, etc. The pathway of orders through office and mills, etc., is carefully followed. At every step the student is expected to take notes. Commenting upon this notation feature Mr. Camp said:

"Last, but not least, in importance, is the test to determine how much of these notes that may be carried under the arm are lodged in the head, where they can be of most service. There follows the examination period, equally dreaded with the examination days of our school or university life. It is a written examination consuming about five days, with a few days preceding devoted to a review, and may include any subject in the course. It is essential that there should be an examination. Aside from the question it solves, 'Are our efforts bearing good fruit?' The examination is a potent, and in one or two instances a necessary stimulus to endeavor, keeping the men on their mettle throughout the course. The relative standing of each man, as developed by the examination, is given to him, and him only, and this result he is expected to transmit to his chief, and any further discussion of his standing rests with these two. Naturally it is the aim of the next man from this office to break the record, and the result is a continuous incentive to labor.

"In this, the latest move for increased labor efficiency, the results, so far as can be seen from our first efforts, are extremely gratifying both to the students and to the officials of the company. Twenty-five salesmen have completed the course and have returned to their stations with a new and broader understanding of their duties. At the beginning of the work, the men selected for the class took up their duties with seeming, and, in several instances, pronounced reluctance, as if it were a disagreeable medicine that had to be taken. Now it is a privilege eagerly sought for, and we have a fast-growing list of future classes. In this education work we are still young. The field is entirely new. We are but feeling our way. Suggestions are eagerly sought for. Improvements are continuously being made. And it is our hope that ere long we will be proud of our school for salesmen."

Mr. Camp's paper was to be the subject of discussion led by Eugene P. Thomas, president of the United States Steel Products Co., but beyond Mr. Thomas' very able paper, which agreed with and reinforced the statements made by Mr. Camp, there was no discussion. The members evidently thought they had heard the last word in the instruction of salesmen when the man whose business it is to train those of one of the biggest and best organized establishments in the country had finished reading his paper, and had nothing to offer either by way of criticism or of emphasis.

Mayari Iron.

"The Use of Mayari Iron in Foundry Mixtures" was the subject allotted to Quincy Bent, assistant to the president of the Maryland Steel Co., and his paper was full of instructive material.

"The Mayari ore deposits of Cuba," said Mr. Bent, "have furnished a wide scope for experimental work in the processes of manufacture and products of both iron and steel. The ore itself is rather unlike any other iron-bearing mineral in common use. A serpentine rock, decomposed by the action of salt, water and heat, leaves on the plateau a bed of soft ore ranging from 12 to 30 feet in depth. The ore is quite uniform in analysis, save for a slight variation in nickel content, and in the amount of silica and alumina; careful mining, however, produces a practically constant ore."

Followed then a short analysis of Mayari ore, after which Mr. Bent proceeded as follows:

"The ore in its natural condition is very similar to a loose clay, not having, however, the plasticity of clay. The transportation of the ore, in its natural state, also presents a serious consideration on account of the high percentage of moisture, resulting in heavy freight charges per ton of pig-iron. This large amount of water, particularly the combined moisture, seems to have some effect upon the furnace operation, taken with the susceptibility of the ore to reduction and carbon deposition. We have used this raw ore in all proportions up to 75 per cent., but the irregularity of the furnace operation thus far indicates that better results can be obtained from a treated material.

"Nodulizing, briquetting and sintering are all available processes for preparing the ore in desirable forms. The first of these is the method at present most largely employed, recommending itself on account of our previous experience with it in the preparation of Corawall concentrates. The nodulizing kilns are 125 feet long, 10 feet in diameter, and have a capacity of about eight tons of finished product per hour. Powdered coal is used as a fuel, about 400 pounds being required to produce a ton of nodules."

After presenting an analysis of the nodules thus produced, and showing the results of "sizing tests," Mr. Bent continued:

"They are easy to handle in grab buckets, bins and chutes; do not carry enough moisture to give trouble in cold weather, and, with the exception of the material finer than 60 mesh, are well suited to blast furnace requirements.

"The briquetting of Mayari ore presents a unique difficulty in handling the material, making it almost impossible to fill molds or to free the chutes or dies. It also has a peculiar quality of preventing the progress of heat through its mass. Bricks of small dimensions may be thoroughly fused on the surface, yet practically unaffected at the center.

"Sintering is entirely successful with Mayari ore, and probably will ultimately be found more satisfactory than nodulizing. Its advantages are the smaller amount of fuel required, and the more open and porous character of the material produced."

In summing up, Mr. Bent said: "The qualities of the iron developed in mixtures have led me to divide its uses into three classes of castings: First—all chilled castings; second, green sand castings or semi-chilled castings; third, dry-sand castings. Under the first head are rolls, guides, crusher plates, wearing plates, die blocks, car wheels and all other castings requiring a hard surface for resistance to wear. The amount of Mayari iron to be used depends entirely upon the depth of chill required and the severity of the service to which the castings are to be put. Ordinary uses range within 15 per cent. to 40 per cent. limits. Our experience with rolls has been most satisfactory, both as to increased life and as to strength and quality of surface. Rolls for both hot and cold work have shown that we can expect from 25 to 50 per cent. increase in life. Guides have given as high as 100 per cent. increase in service, while reports as to crusher plates, etc., have compared quite favorably with manganese steel.

"For green-sand work, where also a hard surface is required, yet where machine work must be done, leaving a fair and uniform surface of close texture, Mayari iron has given most excellent results. Some of the uses are sand rolls,

pipe balls, bending dies, valve bodies, piston rings and shear blades, the percentage of Mayari being from 10 to 30 per cent.

"Under the third heading come castings where a fine finish is required, or a machine wearing surface involving both strength and closeness of grain, such as engine cylinders, valves, guides, slides, etc. This class of casting requires a Mayari addition of 8 to 15 per cent.

"For all the above classes we have found it desirable to keep the phosphorus in the mixture about 0.5 per cent.

"In general we say that Mayari iron accomplishes all that can be gained by the addition of cold blast charcoal iron, with better results as far as wearing surface is concerned. It is superior to any steel additions, inasmuch as its shrinkage and contraction is normal as compared with ordinary foundry iron; that it does not gain its strength by a decrease in carbon content, as in semi-steel, and finally, that it does not have the tendency to chill locally, due to cold or wet spots in the mold.

"The nickel or chromium does not segregate either in iron or steel. The nickel seems to have counteracting effect upon the chromium as far as brittleness is concerned. A little loss is encountered in the Cr. percentage as the mixture passes through a cupola, but the nickel remains unaffected.

"It is our belief that fluidity of the foundry iron is a little increased; the metal is very clean, and a reduction in our defective castings has resulted. There is present in the iron a small percentage of vanadium and some titanium; how much these elements influence the results of our tests is a matter of conjecture. One would naturally attribute the iron's qualities to chromium and nickel. That our ratio—two parts of chromium to one part of nickel—is the right relation for all purposes is hardly conceivable; only experience can develop all the changes within the range of possibility.

"This paper is written entirely in the spirit of suggestion. The few facts that are known to use are set forth, but it must remain for the future to apply scientifically the iron's characteristic features in proper proportion to best meet the various requirements of an alloy iron."

Manufacture of Ordnance.

Mr. Bent's paper was followed by that of E. G. Grace, vice-president and general manager of the Bethlehem Steel Co., on "The Manufacture of Ordnance at Bethlehem Steel Works." After telling how the Bethlehem Iron Co., predecessor to the present company, and others undertook to make guns for the Government in answer to a demand in 1886, Mr. Grace proceeded to speak of the process of manufacture as follows:

"All of the steel to be used in the gun, whether containing alloys or not, is made by the acid open-hearth process, using especially selected stock, and each ingot is fluid-compressed to 89 per cent. of its original volume. The ingot, after the examination referred to, is hollow-forged under a 5000-ton hydraulic press, and is then rough-machined preparatory to tempering. The hollow ingot for a 12-inch tube is 16 feet long, 43¼ inches in diameter and weighs 67,700 pounds. When it has been forged and rough-machined preparatory to tempering it weighs 28,000 pounds, and in its finished state the tube weighs 18,950 pounds. Correspondingly, the weight of the ingots for all the forgings for one 12-inch gun is 458,000 pounds, the rough-machined weight of the forgings is 196,000 pounds. These figures give a fair idea of the large loss in weight the material of the gun undergoes during

its fabrication, representing a yield from ingot to finished gun of a little over 32 per cent.

"The forgings are tempered by being heated to varying temperatures, depending on their shape and composition, and then are immersed in oil, or water, as the case demands. They are subsequently annealed, and finally submitted to the Government inspector, who selects official test bars and directs and witnesses the pulling of the bars to ascertain if the forgings meet the prescribed physical qualities. Tests are also taken for complete chemical analysis.

"The manufacture of armor-piercing projectiles is essentially a metallurgical problem, combined with an elaborate system of heat treatments. The projectiles are made of alloy crucible steel, individually cast, forged, machined and heat treated, the treatment being especially prescribed for each projectile, depending on its known composition. The properties desired are those of extreme hardness on the point for penetration qualities, with a gradual decreasing in hardness in the main body and toward the base of the projectile, to a very tough and fibrous condition, for the purpose of withstanding the shock of impact, and thus protecting and keeping intact the cavity provided in this portion of the projectile for carrying the high explosive charge.

"The manufacture of armor-plate, like projectiles, is essentially a metallurgical treatment process, but with problems as different as are the functions of the two products, they having in common but one feature, namely, that their acceptance depends on the results of ballistic trial.

"Steel for armor-plate is made by either the acid or basic open-hearth process, and is cast in large, rectangular, sand-lined ingot molds, very heavily sink-headed, the sink-head serving as a tong-hold for carrying and manipulating the ingot during the forging operation, as well as insuring sound steel in the body of the ingot.

"The subsequent heating and working of the large masses of alloy steel requires the greatest care and skill. We have cast ingots for armor-plate work weighing as much as 205,000 pounds. Each ingot is forced to the approximate length and width of the finished plate, but to a slightly greater thickness, under a hydraulic press of 14,500 tons capacity. This press is the largest hydraulic machine in the world, and has a working pressure of 7000 pounds per square inch.

"After forging, the plate is carbonized, this process consisting of covering the face of the plate with a carbonaceous material, and then continually heating it for a number of weeks until the face of the plate has absorbed carbon to a depth of about 1¼ inches, thus giving a plate of steel with one side much higher in carbon content than the other. The plate is then reformed to its finished thickness, this operation being done with such accuracy that, whether the plate be of even thickness or tapered, it is not necessary to machine its face, as is the practice in Europe in order to obtain a clean and even surface."

Mr. Grace's paper completed the program for the forenoon session, and at its conclusion recess was taken until afternoon, during which a buffet lunch was enjoyed by the members.

Coal Mine Ventilation.

The afternoon session was opened by Austin King, chief mine inspector of the H. C. Frick Coke Co., who read a most valuable paper on "Coal Mine Ventilation in the Connellsville Coke Region." He said:

"The many disasters in bituminous coal

mines which occurred during the past few years and which involved such enormous loss of life have stimulated research into the chemical composition of mine gases and the physical characteristics of coal to such an extent and with such success that bituminous coal mine ventilation as a factor in the prevention or cause of mine explosions is now better understood than ever before. And we sincerely hope that with such knowledge and its timely application the days of such disasters are past."

Mr. King then discussed the comparative freedom from the gas in the early mining of practically the western half of Westmoreland county, Pennsylvania, he having had charge of mines located there in 1880. Yet, he pointed out, no explosive gas was met with in it until pillar drawing had so far progressed as to cause large falls of roof. Further, he said:

"In addition to the intrusion of explosive gas, and some danger from spontaneous combustion, we have, of course, the vitiation of mine air, which is caused by the smoke from lamps and explosives; the breath and exudations from men and animals; the decomposition of timber and the absorption of the oxygen by the gases evolved from coal and rocks in solid or pillar workings in contact with it. The proper ventilation of a mine must accomplish two things; first, supply sufficient pure air to the men and animals employed, and second, remove, dilute and render harmless the noxious and dangerous gases generated therein."

Considerable time was devoted to the discussion of the proper amount of air to be supplied by mechanical fans, which he declares the best; and the least troublesome. Descriptions of the manner of constructing the long air ways into and through the mines was presented, showing that the larger mines contain from 20 to 50 or more miles of air ways, which must be kept dry and clear of obstructions. The nature of the roof for a few feet over the seam makes it difficult to maintain air ways of such length free from obstructions. The use of locked safety lamps, employment of "fire bosses" and safety committees of workmen are discussed. In conclusion, Mr. King said:

"We believe that the best means of keeping a mine in a safe and healthy condition is to supply large volumes of air and so conduct the same as to sweep every road, working place and corner of it free of dangerous and deleterious gases."

In a paper discussing the paper of Mr. King, Wilson A. Luce, general manager of the Ellsworth Collieries Co., strongly endorsed what had been said, and added the weight of his authority, gathered from long experience, to the conclusions announced by Mr. King.

"Recent Developments in the Preparation of Iron Ores" was the subject of an exhaustive treatise by J. W. H. Hamilton, mining engineer. Mr. Hamilton described the various methods of preparation in use in this and other countries, and made application of their lessons as follows:

"That all these developments in the preparation of iron ores which have been presented have been made while we still have a large supply of high-grade ores that can be utilized without any preliminary treatment gives evidence that a great deal more must be done in the near future, as we are rapidly entering into the era of low-grade ores."

In a paper on "Microscopic Analysis of Steel Sheets" C. Arthur White of the American Sheet & Tinplate Co. set forth the advantages of the use of the microscope to insure perfect work. He illustrated his talk with photographs thrown

upon a screen, showing defects in sheets that could only be discovered by such means, and urged the adoption of close microscopic scrutiny in the interest of a higher degree of efficiency in the work turned out.

A paper on "Electric Power Production and Distribution in Steel Works," by Stewart C. Coey, engineer of the Youngstown Sheet & Tube Co., with a discussion by B. R. Shover of the Brier Hill Steel Co., furnished a most interesting feature, with which the program of the afternoon was closed. While Mr. Coey leaned a little toward the gas engine for the development of electric energy, Mr. Shover was decidedly in favor of the steam turbine as being in the long run more economical. Both gentlemen being experts, the discussion possessed some very valuable features, as setting forth the views of men who know.

The annual banquet of the Institute took place at night, when the great banquet hall of the Schenley was crowded with the hundreds who sat at table. After doing full justice to the substantial and delicacies set for their delectation, those present enjoyed the real piece de resistance of the entire program, which was a moving-picture illustration of the process of steel-making from the taking of the ore from the deposits in the Mesabi range to the rolling of the rail in the mill at Buffalo.

The pictures showed the stripping of the earth from the top of the ore, and then the working of the ore on five different levels at the same time. The great steam shovels, which take up 7½ tons at a time and transfer it to the waiting car; the engines puffing in and out the mines with the empty and the loaded cars; the transfer of the ore to steamers built for its transportation; the arrival at the mill, and the various processes through which it was there put, were all shown with absolute distinctness. The pictures, which were of the best that moving-picture photography can produce, were explained as shown by Henry B. B. Yergason, Cincinnati manager for Rogers, Brown & Co., Buffalo. The pictures were taken, as Mr. Rogers explained before they were shown, as an advertising proposition. They will no doubt be shown at many places throughout the country, and will unquestionably attract great attention, as they constitute, with the lecture that accompanies their presentation, a liberal education in steel-making.

While today was called one of the days of the meeting, there was no set program, and each member of the Institute mapped out his own course. Various institutions in and about the city sent invitations to them to visit, and some went one place and some another in the pursuit of such instruction and entertainment as each desired.

The consensus of opinion tonight is that this has been one of the most useful meetings the Institute has held. Coming at the time it did, and bringing together the leading men in the country's leading manufacturing business, each to exchange with the other his confidence of faith in the country's continued prosperity, and each to be strengthened in his optimism by the optimism of the other, the effect of the meeting will radiate far beyond the limits of its mere membership to the steadying of business everywhere and greatly to the country's good.

GEO. BYRNE.

Truck growers in the neighborhood of San Benito, Tex., have organized a fruit and truck growers' sales agency, with J. O. Zimmerman, president; T. J. Thornhill, vice-president, and G. S. Clapp, secretary and treasurer.

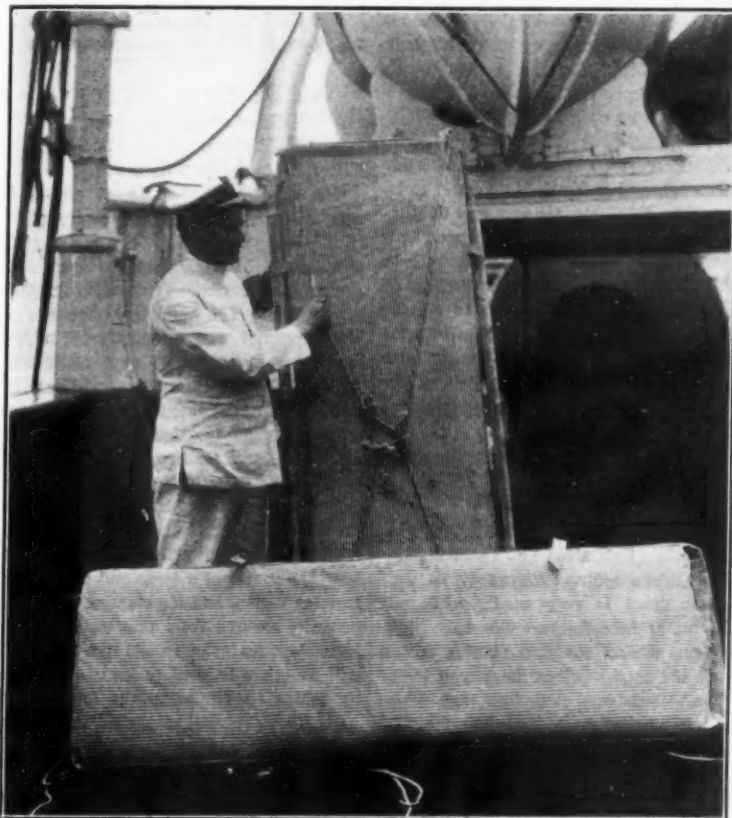
MATTRESSES AS LIFE RAFTS.**Demonstration of an Important New Life-Saving Appliance.**

Among the important life-saving devices for use on shipboard that were brought before the Army Board on Life-

It is light enough to be carried easily by one person, and when made into a raft can be thrown overboard with a small line attached, and held so that the persons using it may be lowered on a ladder or line to reach the raft, or, if necessary, it may be thrown overboard, and persons

duration. On the fourth day after the test began it was found that the raft showed no signs of sinking. Under the instructions of Col. Chauncey B. Baker, Quartermaster Corps, U. S. Army, president of the board, and Inspector-General George Uhler, United States Steamboat

ham. A larger volume of inquiry was received in the week than in the week previous and a wider range of territory was covered. The conditions existing in the North and East are reflected in the inquiry being made in this market, which has a tendency to strengthen local prices,

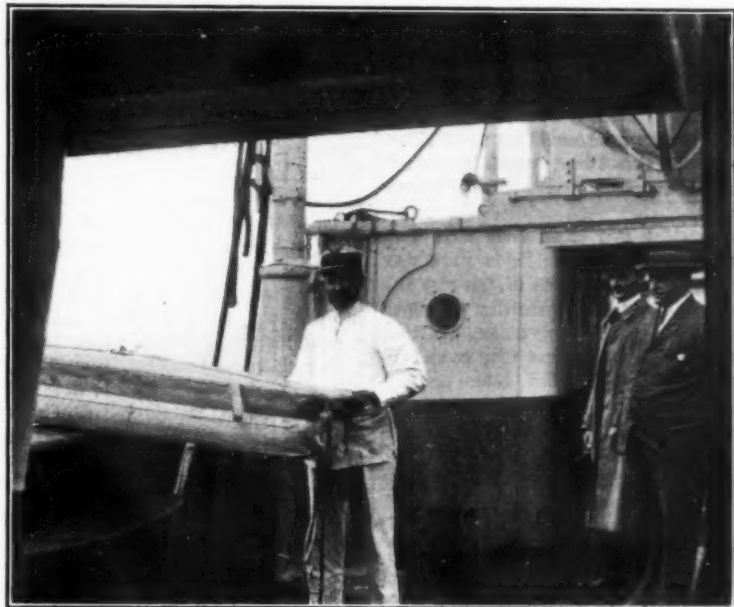


TOP AND BOTTOM OF STATEROOM MATTRESS.

boats and Life-Saving Appliances, one that attracted much notice was the Universal Safety Mattress, shown in the accompanying illustration.

This mattress is for use on shipboard or in localities subject to floods which are

jumping into the water will find the raft capable of supporting as many as can get hold of it in the water, or a lesser number may be supported clear of the water by climbing upon it. The necessary lashings and hand-holds form a part of the raft



TWO MATTRESSES FORMING RAFT.

sometimes experienced in the river sections of various parts of the world with loss of life. It has been designed and patented by Lieut. S. P. Edmonds, U. S. R. C. S., retired, of Catonsville, Md.

The mattress is made to fit any bunk or bed, and is as comfortable as any ordinary felt mattress. The narrow 24-inch mattress shown in the illustrations is about as small as could be made for sleeping purposes, and was made to fit the smallest bunks of the army transports,

and are always ready for use. Such number of mattresses may be secured together as may be considered necessary.

In the demonstration and tests before the Army Transport Board, as shown in the photographs, the inventor maneuvered the 24-inch mattress as a raft about the harbor basin with one oar, two oars and by swimming without oars. After this demonstration the raft was weighted in the water and secured alongside the transport Meade for a test of its floating en-

GETTING AWAY FROM THE VESSEL.

Inspection Service, a member of the board, the two mattresses forming the raft were separated; one of them was sent to the quartermaster depot for examination of the materials of which it is made and the other was punctured and torn with a number of holes into the filling of the mattress from the six sides. The mattress was then weighted down alongside the army transport Meade for observation as to the length of time it would float.

A telegram just received, 10 days after the mattress was put over, is as follows: "No sign of mattress sinking. Apparently same as put over."

"LOTHROP, Master of Transport Meade." Lieutenant Edmonds will make still further demonstrations of the mattress and raft before the United States Board of Steamboat Inspectors at an early date.

BIRMINGHAM IRON MARKET.**Larger Volume of Inquiry in Wider Range of Territory.**

[Special Cor. Manufacturers Record.]

Birmingham, Ala., October 28.

Without evidence to the contrary, the local pig-iron market is considered correctly represented by a basis of \$14 per ton at Birmingham for No. 2 foundry, when delivery can be made prior to the beginning of the second quarter. The market price for the second quarter and first half has not been established, and it is probable that order books will remain closed to such requirements for another 30 days. This condition is due to the tonnage being furnished by the producing interests in excess of contract requirements, as well as to the disposition to follow a conservative course in the matter of additional commitments in the face of general conditions. However, there is no evidence of eagerness on the part of the trade to close for advanced requirements at the prices that could be obtained. It is noted that since the last advance the buying in all quarters of the trade has been on a limited scale, and that actual requirements have been the principal considerations. The sales made in the past week aggregate a very small tonnage, practically all of which is for immediate shipment. For this just referred to the lowest price involved is believed to have been a \$14 Birmingham base, as a number of small lots were sold at \$14.25 and other lots at \$14.50 per ton at Birmingham.

especially for spot deliveries. Incident to this last, the car situation is no more encouraging, while labor conditions have not improved. The schedule of prices below is quoted for foundry iron per gross ton f. o. b. cars Birmingham, with the market practically in the hands of the producing interests, viz.: No. 1 foundry, \$14.50 to \$15; No. 2 foundry, \$14 to \$14.50; No. 3 foundry, \$13.50 to \$14; No. 4 foundry, \$13 to \$13.50; gray forge, \$12.50 to \$13; standard basic, \$14 to \$14.50; charcoal iron, \$22.50 to \$23.

The recent advance in the price for warm-blast charcoal iron is being maintained, and one additional furnace is being prepared for blowing in. With the addition proposed, three stacks will be in operation in the Birmingham district on charcoal, making a total daily output of some 225 tons of chilling grades.

Standard basic is quotable at prices in line with those asked for No. 2 foundry, with off basic quotable at a differential of 50 cents per ton. The make from the furnaces now in blast is being taken at local steel plants, and it is not probable that additional furnaces would be put in operation on this particular grade unless a very attractive tonnage was offered, owing to the condition of foundry iron order books.

Local cast-iron water-pipe producers have just been awarded some 3000 tons of water pipe for early delivery in the requirements of San Pedro, Cal.; Los Angeles, Cal.; Weiser, Idaho, and Waco, Tex. It is understood that the specifications for the tonnage mentioned are in hand, and that delivery will be made as cars are supplied by the railroad companies. For municipal requirements recent price considerations were in line with quotations, but for the smaller order for maintenance work a higher average has been received, and it is not improbable that all quotations will be advanced shortly by reason of the condition of order books. Water pipe is quoted as follows per net ton f. o. b. cars here, viz.: 4-inch, \$24.50; 6-inch and up, \$22.50, with \$1 per ton extra for gas pipe. Special fittings are quoted at \$50 to \$55 per ton at foundry, depending on the size of the requirement.

Incident to the cast-iron pipe market, recent advices announce the letting of a contract to the Virginia Bridge & Iron

Co. for the steel construction in the main building of the foundry plant to be built at Anniston, Ala., by the Lynchburg Pipe & Foundry Co. of Lynchburg, Va. The buildings are to be of steel and reinforced concrete, and the construction is to be under way as soon as the necessary grading can be finished. Formal announcement has also been made of the incorporation of the National Cast Iron Pipe Co., of which mention was made in last report. The officers of the company mentioned are: A. H. Ford, president; E. E. Linthicum, vice-president and general manager, and A. E. Nelson, secretary-treasurer, all of whom reside in Birmingham. The plant is to be located at Boyles, Ala., on the Louisville & Nashville Railroad, and is to be ready for operation within 12 months.

In the coal and coke market the principal consideration at this time is the supply of cars and the dispatch of all shipments en route. Both steam and domestic coal is in greater demand than at any time for some years past at this season, and deliveries have never been obtained under more difficult circumstances. At Gulf points the shortage of equipment and delay in delivery is being felt very keenly, and as a result prices for the tonnage carried in storage continue to advance. Practically all local operations are behind with shipments of domestic coal, and as operations have necessarily been curtailed with the shortage of cars, the trade cannot be supplied with the tonnage engaged. Prices have been advanced for Alabama coke by reason of the heavy demand from the local furnace companies, and all available ovens are being operated. Standard 48-hour coke has sold within the week at premium prices, while 72-hour coke, not under contract, is quotable at \$3.75 to \$4.25 per ton at ovens. Incident to mine operations, it is understood that one of the leading furnace companies will in a short time place contracts for the erection of two modern coal washers, and will, with other improvements, expend some \$150,000 on local properties.

Specifications for finished material are still received at a rate in excess of the daily output, and it is understood on good authority that one local mill has entered sufficient tonnage to take care of the entire output during the next six months. All departments of the several finishing mills are in full operation, and double turns are being worked where practicable. For certain classes of material premiums are being paid for spot deliveries, while the regular scale of prices as last revised is being fully maintained for staple products.

The market for old material continues to improve, although the inability to assemble tonnage of certain grades at a rate equal to the demand is complained of. The movement of wrought and steel grades is more satisfactory, while light cast and machinery scrap is being consumed at local plants as fast as furnished, which is due to the scarcity of low-grade pig-iron.

Dealers' asking prices are about as follows per gross ton f. o. b. cars here, although subject to revision with change in the several local conditions, viz.:

Old iron axes, \$15.50 to \$16.
Old steel axes, \$13.50 to \$14.
Old iron rails, \$13 to \$14.
No. 1 railroad wrought, \$12.50 to \$13.
No. 2 railroad wrought, \$11.50 to \$12.50.
No. 1 country, \$9.50 to \$10.
No. 2 country, \$7.50 to \$8.
No. 1 machinery, \$10.50 to \$11.50.
No. 1 steel, \$10 to \$11.
Tram car wheels, \$9.50 to \$10.
Standard car wheels, \$12 to \$12.50.
Light cast and stove plate, \$8.50 to \$9.

BUILDING AT ASHEVILLE.

Divers Improvements Aggregating \$1,750,000 in Value.

Board of Trade,
Asheville, N. C., October 26.

Editor Manufacturers Record:

Asheville is now enjoying a period of substantial growth, the greatest in its history. New hotels, new dwellings, new business blocks, new streets, together with additions and improvements to existing hotels and business blocks, are taking form, and the sound of trowel and maul sings a merry song of concrete progress on every hand in every section of the city. The total amount of new construction work completed, now under way and projected since January 1, 1912, will reach \$1,750,000. Among the large pieces of work are the Grove Park Inn, overlooking the 18-hole golf course on Sunset Mountain, of unusual and unique construction, the walls built of stone, with the outer surface finished with the natural boulders and small stones, varying in size from a man's hand to a wagon-bed, each of which is safely and securely tied into the main wall with cement which is not visible to the eye, the stones appearing just as removed from the mountainside. The builder of this hotel, Mr. E. W. Grove, will widen the exclusive autoway which he constructed and opened to the public last year to a width of 30 feet, reducing many of the sharp curves, making of it a beautiful boulevard from foot to summit of Sunset Mountain. The total cost of hotel and improvement to autoway will likely exceed the estimated cost of \$500,000.

The Battery Park Hotel, famous everywhere, will go into the hands of contractors December 1, the entire third and fourth floors being made entirely new, enlarging all rooms, installing running hot and cold water, with baths in each one of them, the remaining floors to be completely overhauled and hot and cold water and baths installed in each one of them. A second electric elevator will be installed next to the one recently put in, increased demand for elevator service making this imperative. Estimated cost of all work \$65,000.

In addition to this work, Mr. Tenche Cox, manager of the Cox estate, is opening a street from Patton avenue, just opposite Battery Park place and within 150 feet of the postoffice, to Southside avenue, a distance of a third of a mile, which will consist of a fill the entire distance. It will require 93,000 yards of earth to make this fill, the greatest dept at any one point being 45 feet, and this within a short distance of Patton avenue. This street will open up several acres of desirable business and residence property right in the heart of the city which has heretofore been unavailable by reason of the ravine existing between these two points. A three-quarter-yard-capacity steam shovel has been ordered for this work and is expected to reach the city in next two weeks. Work has already begun, the dirt being removed from Battery Park Hill, facing Patton avenue, and making room for additional business blocks. This work is estimated to cost \$25,000; fireproof machine shop and garage on North Main street, complete with equipment, will cost \$25,000; Merriwether Hospital, on Grove street, \$20,000; Trinity Episcopal Church, \$50,000; Christian Scientist church, \$15,000; Haywood Street Methodist Church, \$10,000; Asheville School for Girls, Inc., additions, costing \$20,000; new popular-price theater on College street, \$20,000; addition to express company's building by Cox estate, \$8,000; improvements in buildings now occupied by stores and

offices for European Hotel, for use of Kandy Kitchen Company, on Haywood street, \$75,000; new business block on Haywood street erected by Frank Loughran, \$12,000; improvements and additions to eight stores immediately north of the Langren Hotel, \$35,000; new Masonic Home, corner North Main and Woodfin streets, \$35,000; new Eagles' Home on North Main, nearly opposite Masonic Temple building, \$20,000; a new Kenilworth Inn, to be built on site of old Kenilworth Inn by Chicago capitalists, \$250,000; business block on College street by J. C. McPherson to cost \$20,000; a brick business house on North Main street to be erected by R. E. Bowles at a cost of \$12,000. This is but a partial list, and is a wonderful record in construction work in Asheville, the result or culmination of consistent and persistent efforts on the part of a number of Asheville citizens for the past two years to create greater faith in Asheville and a greater spirit of optimism justified by the splendid resources of Asheville.

N. BUCKNER, Secretary.

Wants Industries.

State Bank of Columbia,
Columbia, Va., October 23.

Editor Manufacturers Record:

This town is very small, with only about 250 inhabitants. We have three or four general stores, a planing mill, a bank and a grist mill in the way of industries. We have a first-class high school and churches of three denominations. Our citizens are respectable and congenial, and, taking it as a whole, it is a very desirable place to live. We are in close proximity to raw material, such as pine, oak and gum timber, which could easily be utilized. Within our town limits there is a magnificent deposit of granite, almost on the railroad track, which could be gotten out without any hauling whatever and very inexpensively. The only thing we lack is capital. If we could get someone with capital interested enough to start something here, our citizens would subscribe in a small way and lend every encouragement possible. Some of our public-spirited citizens have gone so far as to offer, absolutely free, building sites to anyone starting an industry here that seemed to mean business and would put up buildings on them. Our Town Council has agreed to make taxes very low in order to attract capital.

We think that if all these facts were brought before the public in some way it would not only benefit us, but also any persons contemplating starting something new or moving for any reason, and that they could not do better than come here and look around, anyway, before deciding on a location.

G. P. HODGSON, JR., Cashier.

To Promote Dairying.

Commercial Club,
San Benito, Tex., October 19.

Editor Manufacturers Record:

At a meeting of board of directors of Commercial Club a company with \$25,000 capital stock was formed to purchase good Holstein and Jersey cows to sell to the San Benito farmers to promote the dairy interests. The cows will be brought in 100 at a time and placed with the farmer on monthly payments at practically cost price laid down here. In this section of country green feed can be grown practically the year round, and one acre will more than take care of two cows besides the hogs and chickens, which can be fed from the skimmed milk. The company will guarantee to deliver the cows in the next six months.

A large creamery will be built adjoining

the Ice & Cold Storage Co. San Benito is very favorably located for a creamery, as the 265 miles of the San Benito Interurban "Spider Web" Railroad, forming a network of road over the surrounding country, will enable the farmers to ship their cream in at small cost twice a day if desired, and as soon as shipments justify the interurban will put on special milk cars. J. A. GRAHAM, Secretary.

Cold Storage at Wilmington.

Chamber of Commerce,
Wilmington, N. C., October 28.

Editor Manufacturers Record:

One of Wilmington's latest and best enterprises will be the cold-storage plant of the Independent Ice Co., being erected at a cost of \$100,000, which will soon be ready for operation. It contains 300,000 square feet. The building is five stories high, fireproof, and is constructed of reinforced concrete. The new plant will revolutionize cold-storage conditions in this section of the country, and on account of its splendid location will be able to cater to a large territory. The plant has been equipped with the very latest machinery, and has a convenient location on the lines of the Atlantic Coast Line and Seaboard Air Line railways. Wilmington is in the center of a large and prosperous farming region, and the storage of various products secured from this territory will be made a feature. In addition to this, it will doubtless be used to great advantage by fishing companies on the lower Cape Fear River. It will supply the home market and the surrounding territory with such products that are usually in demand the year around, thus saving the expense of freight rates from storage plants in other States. The officers of the cold-storage plant are the same as those of the Independent Ice Co., as follows: J. A. Springer, president; D. H. Penton, vice-president; W. E. Springer, secretary and treasurer; L. H. Simmons, general manager. H. B. BRANCH, Secretary.

Oil and Turpentine Substitutes.

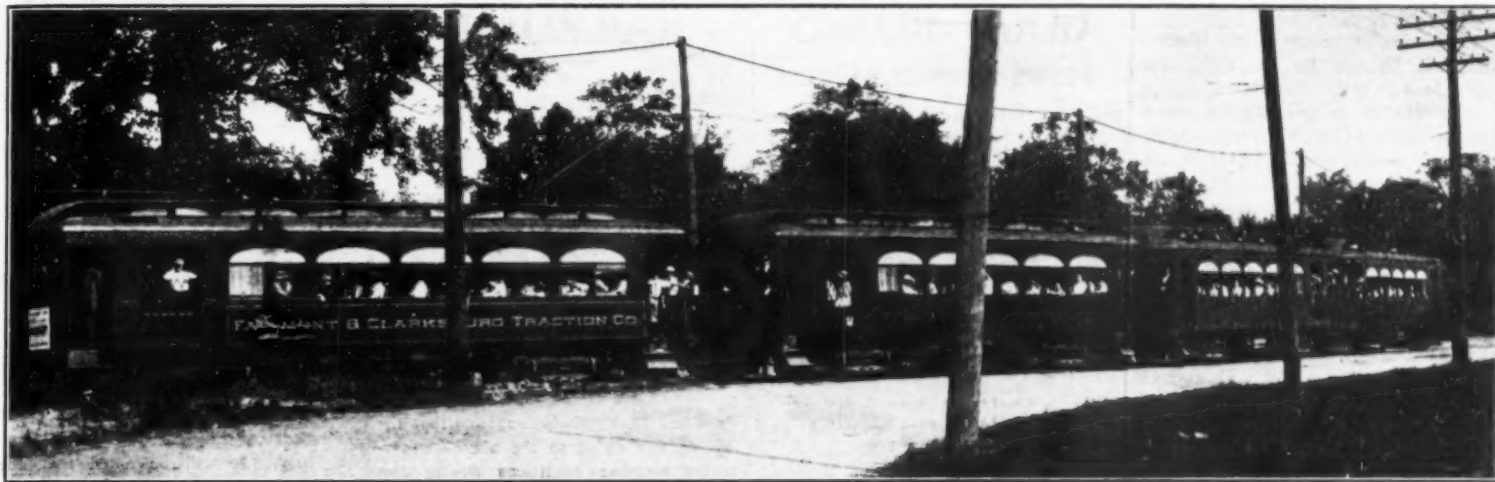
The Southern States Refining Co., Jacksonville, has completed its plant for manufacturing linseed oil and turpentine substitutes from a petroleum product. The substitutes will be known as "linoil" and "taylorline." The plant covers an area 510 feet long by 210 feet wide, and has a daily distilling capacity of 150 barrels. It includes three refining tanks with capacity of 1900 barrels of finished product, and three buildings for distilling, pumping machinery and general offices. This company was previously organized with a capital stock of \$250,000 and the following officers: President, Gus Miller; vice-president, John J. Ahern; treasurer, J. Harvey Beath; secretary, A. B. Henry. The directors are the officers and C. E. Taylor, Charles Blum and J. E. Taylor, the latter being the discoverer of the process used.

Texas Industrial Congress Prieze.

The fourth annual convention of the Texas Industrial Congress will be held in Dallas in the auditorium of the Chamber of Commerce Thursday, December 12, 1912. The principal feature will be the awarding of the \$10,000 in gold prizes offered by the congress for best yields of corn, cotton, kafir corn and milo maize produced in the State this year.

A \$2,000,000 Cotton Estate.

The Deer Creek Cotton Estate, Memphis, Tenn., has been incorporated with \$2,000,000 capital stock by Roydon Dixon, Claude Seals and John B. Dickinson.



FOUR-CAR ELECTRIC TRAIN IN WEST VIRGINIA.

The accompanying illustration shows one of the four-car trains of the Fairmont & Clarksburg Traction Co. of West Virginia, whose lines connect Fairmont, Clarksburg, Weston, Bridgeport, Grasselti, Mannington and other points. The several railways are of up-to-date construction, with superior equipment as in the picture. They have been in operation for several years, and the success of the company is well known. It is a progressive corporation, and extends its tracks wherever there is a field for business. S. L. Watson is president; C. W. Watson, vice-president; Walton Miller, secretary and treasurer; J. O. Watson, general manager, and Smith Hood, general superintendent. Its headquarters are at Fairmont, W. Va.

Clyde Terminals for Charleston.

H. H. Raymond, vice-president and general manager of the Clyde Steamship Co., New York, writes to the MANUFACTURERS RECORD as follows:

"Relative to particulars of construction of our proposed new terminals at Charleston, S. C., would advise that the contract for this work has been awarded to W. P. Richardson & Co. of Jacksonville, Fla., and the work is now being proceeded with. The proposed improvements will consist of two piers, one 112 feet wide and 425 feet long and the other 274 feet wide and 425 feet long, with bulkhead construction 600x75 feet. The substructure will be of creosoted piling, and the pier sheds of wood frame and corrugated sheet-iron sides. The bulkhead building will be of steel frame and corrugated sheet-iron sides; the approximate cost \$500,000."

W. P. Richardson is quoted, in reference to his firm's contract, as follows:

"The substructure of the new piers will rest on creosoted piling. Pier No. 1, the single pier, which is to be built first, will be 500 feet in length by 125 feet in width. The double pier, to the south, which will be built next, will be 500 feet in length by 275 feet in width. There will be two railroad tracks alongside Pier No. 1, on the north side, next to the wharf used by the Philadelphia & Gulf Steamship Co. In the center of the double pier will be four parallel railroad tracks. The bulkhead platform for the storage and delivery of goods will be 610 feet in length and 75 feet in width. The frontage of the new terminals on Concord street will be two stories in height. The second-story portion will be used for the general offices of the company. The principal part of the substructure will be of creosoted lumber. The superstructure will be of steel frame, covered with corrugated galvanized iron on the sides. The roof will be of Barrett's specification of tar and gravel. The accommodations for ships between piers will be about 200 feet in width. The driving of test piles will begin within one week. The new terminals are to be completed within 12 months. The material is now being assembled for the work of construction. Orders for the piling are being placed and also for the creosoted lumber."

Mississippi Commercial Secretaries.

The Mississippi Commercial Secretaries' League has been organized with Rufus Jones, secretary of the Business Men's League, Corinth, president; E. L. Tarry, secretary of the Commercial Club, Yazoo

City, secretary; J. B. Lusk, secretary of the Board of Trade, Jackson, chairman; W. H. Hays, secretary of the Business League, Greenwood; J. C. Pate, secretary of the Business League, Itabena, executive committee.

Wants Water-Works.

Board of Trade,
Cooper, Tex., October 16.

Editor Manufacturers Record:

Cooper is without water-works. We would like very much to interest a company in a water-works here. We have an excellent opportunity for a good live enterprising company of this kind. The fact of not having water-works handicaps the growth of our city greatly. If we could succeed in inducing a company or capital to install water-works we could more than double our population six months after installation.

Cooper is on the Texas Midland Railroad, 22 miles south of Paris and 75 miles northeast of Dallas. It has a population of about 3000, and is the county-seat of Delta county, which has a population of a little more than 16,000, and the bulk of the trading of the county is done in Cooper.

R. D. STERNE, Secretary.

Pipe Works for Birmingham District

The National Cast Iron Pipe Co., Birmingham, has incorporated with \$5000 capital stock and privilege of increasing to \$300,000. It has a 50-acre site at Boyles, Ala., where it will build a plant for manufacturing water and gas mains from 4 to 30 inches, the daily output to be 150 tons of finished product. When in operation the plant will employ from 400 to 500 men. Officers have been elected as follows: President, A. H. Ford; vice-president and general manager, E. E. Linthicum; secretary-treasurer, A. E. Nelson; directors, Messrs. Ford, Linthicum and Nelson, George B. Tarrant, F. M. Jackson, each of Birmingham, and O. W. McMillan of Pensacola, Fla.

To Develop 98,000 Acres.

Robert J. Starr, president of the Home Investment Co., Saskatoon, Canada, is at Miami, Fla., negotiating for the purchase of 98,000 acres of Everglade land southwest of Lake Okeechobee. He represents London capitalists who propose to develop the property for agricultural purposes, providing additional drainage wherever necessary. It is stated that the transaction will involve more than \$1,000,000. The land is the John Henderson estate, bordering on Lake Okeechobee for more

than 25 miles. Mr. Starr wires the MANUFACTURERS RECORD that the proposition has not reached a point where he can give any details.

Of Benefit to the South.

Referring to the account in the MANUFACTURERS RECORD of the visit of the foreign chemists to Shreveport, Secretary E. L. McColgin of the Chamber of Commerce of that city writes:

"The benefit of this trip to the South will be aided more than anything else by the wide publicity you are giving to the significance of it. The interest these people manifested in this section was very gratifying, and all of us who took part in preparing and carrying out the plans for entertaining them felt amply repaid for our trouble by the appreciativeness of our guests."

Arranged for Oil Refinery.

The Regal Oil & Gas Co., J. K. Duffy, secretary, 315 Madison avenue, New York, writes to the MANUFACTURERS RECORD:

"Our plans have progressed far enough to permit us to announce that we are now arranging for the immediate building, by the Phoenix Refining Co., an Oklahoma corporation, subsidiary to this company, of a refinery at Sand Springs, Okla., with a daily capacity of 2000 barrels. The refinery site is at the Arkansas River in Sand Springs, having an area of 25 acres, and is located near the producing properties controlled by this company."

Attracted to Arkansas.

Secretary George R. Brown of the Board of Trade of Little Rock, Ark., states that as a result of the work of the Publicity Bureau of the Arkansas Bankers' Association at the Detroit meeting of the American Bankers' Association there have been received offers of loans ranging from \$50,000 to \$250,000 upon mineral, transportation and manufacturing projects in Arkansas.

North Carolinians Celebrate for Drainage.

Citizens of Robeson county, North Carolina, formally celebrated last week the beginning of the work of cutting 56 miles of canals for the reclamation of 33,000 acres of land by draining several swamps into the Lumber River. The Brett Engineering & Contracting Co. at Wilson, N. C., is doing the work, which it is expected will cost \$150,000.

Progress of Cheat River Development

The West Penn Traction & Water Co. (W. S. and J. S. Kuhn), Pittsburgh, is progressing with its hydro-electric development on Cheat River in West Virginia, near Cheat Haven, Pa. F. W. Scheidenhelm of Pittsburgh, chief engineer of the American Water-Works & Guarantee Co. (J. S. Kuhn, president), writes to the MANUFACTURERS RECORD as follows:

"Contract for the construction of the dam and the substructure of the powerhouse was let on July 22 to the T. A. Gillespie Company, Pittsburgh. The operations carried on to date involve the excavation for the east abutment of the dam and for the foundation of the transformer-house and portion of powerhouse. A cofferdam has been built in the river, which encloses the sites for the powerhouse, forebay and part of the tailrace. This cofferdam has been completed, and active excavation within the same is to be undertaken at once. The principal dimensions of the structures may be stated as follows: The dam, which is to be of massive concrete construction of the gravity type, will be about 800 feet long. For about 500 feet of its length the height of the dam from the foundations to the top of the spillway crest will measure about 80 feet, and to the floor of the bridge over the gates which are to surmount the dam about 100 feet. The spillway section of the dam is about 650 feet long, and joins at its western end the powerhouse and forebay structure. The length of the powerhouse is approximately 140 feet. Provision is being made for the installation of four 12,000-horse-power units of the vertical type, operating under 82-foot head. Contract for furnishing the turbines has recently been let to Wellman-Seaver-Morgan Company of Cleveland, O. George F. Rowell is engineer in local charge of construction at Cheat Haven. Design for power-plant machinery has been entrusted to W. E. Moore, general manager of the West Penn Traction & Water Power Co. The date set for the completion of this hydro-electric plant is December, 1913."

Mr. Scheidenhelm also writes to the MANUFACTURERS RECORD as follows: "The West Virginia Power & Transmission Co. is intended to take care of the distribution of electric power in West Virginia markets, obtaining its hydro-electric power from the water-power developments on Cheat River." This company was recently incorporated by Mr. Scheidenhelm and associates.

Western Maryland's Statement.

The income statement of the Western Maryland Railway for the fiscal year ended June 30, 1912, shows operating revenue \$7,243,058, increase \$42,125; operating expenses \$4,798,567, increase \$358,340; net operating revenue \$2,444,490, decrease \$316,216; total income \$3,121,349, increase \$94,127; surplus after charges, preferred dividends, etc., \$289,117, increase \$69,703.

American Road Builders.

The American Road Building Association will hold its annual convention at Cincinnati, December 3-6. The officers of the association, which has its headquarters in New York, are Nelson P. Lewis of New York, president; Harold Parker, J. B. Meriwether and W. A. McLean, vice-presidents; E. L. Powers, secretary, and W. W. Crosby treasurer.

To Grow Sugar-Cane.

The Sarasota Fruitville Co., Sarasota, Fla., will develop 1000 acres of land for sugar-cane cultivation. This company was recently referred to as incorporated with \$200,000 capital stock, and it has organized with J. H. Lord as president, main office in the Marquette Building, Chicago.

The Citizens' Light & Power Co. of Taylor, Tex., according to a report from there, has been acquired by the Texas Power & Light Co. of Dallas, of which J. F. Strickland is president. He is also president of the Southern Traction Co., which is building an electric railway from Dallas to Waco, and it is believed that the company will, after reaching Waco, continue construction to San Antonio via Taylor and use the power plant for operating cars, as well as for other purposes.

The Waterways Navigation Co. of St. Paul, Minn., with capital stock of \$10,000,000, is reported organized there to operate power boats and barges on the Mississippi River from St. Paul to New Orleans via St. Louis. The organization committee consists of G. T. Pepper, president of the Industrial Securities Corporation, and W. A. Sharp, both of St. Paul, and A. E. Nelson of North Dakota.

The National Federation of Retail Merchants, Martin J. Maloney of Detroit, Mich., president, and J. R. Moorehead of Lexington, Mo., secretary, will hold its annual convention at St. Louis November 19-21.

The ninth convention of the National Rivers and Harbors Congress, Hon. Joseph E. Ransdell, president, and S. A. Thompson, secretary, will be held at Washington December 4-6.

The Investment Bankers' Association of America, George B. Caldwell president and F. R. Fenton secretary, will hold its first annual convention at New York November 21-22.

The Board of Trade of Waycross, Ga., is circulating an attractively-illustrated folder descriptive of the advantages and opportunities of Waycross and Ware county.

Plans are under consideration for the setting apart of certain lands on the east bank of the Mississippi River in Louisiana and Tennessee as a national forest reserve.

The office of the Kentucky Geological Survey has been removed to Frankfort, Ky., with J. B. Hoing, director.

An international building exhibition is to be held at Leipzig, Germany, from May to October, 1913.

GOOD ROADS**WEEK'S HIGHWAY RECORD.****Progress in Southern Road and Street Improvement.**

[Full details of highway undertakings are given in the Construction Department, published elsewhere in this issue.]

Bonds to Be Voted.

Gastonia, N. C.—City votes November 30 on \$32,000 bonds for street improvements.

Mt. Vernon, Ky.—Rockcastle county will vote on \$100,000 bonds for road construction.

Contracts Awarded.

Baltimore, Md.—City awarded contracts at \$44,993.50 for street paving.

Birmingham, Ala.—Jefferson county awarded contract to grade, drain and surface with chert three miles of road; cost \$8000.

Charlotte, N. C.—City awarded contract to lay cement sidewalks; 1040 square yards concrete sidewalks and 1200 cubic yards grading.

Dallas, Tex.—City awarded contract at \$17,000 to pave Colonial avenue.

Galveston, Tex.—City awarded contract at \$3754.78 to pave two blocks of Broadway; 2333 square yards concrete pavement and 784 linear feet concrete coping.

Orange, Tex.—county awarded contract at \$21,776.50 to construct 58 miles of road.

Richmond, Tex.—Fort Bend county awarded contract to construct 2½ miles of gravel road on Richmond-Foster public road, and about 2¼ miles of gravel road on Rosenberg-Foster public road.

Salisbury, N. C.—Public Service Co. awarded contract to pave between its tracks on Main street; about 9000 square yards seven-inch concrete and two feet on each side; amount available, \$15,000.

Statesville, N. C.—J. T. Plott has received contract for about 12 miles grading.

Contracts to Be Awarded.

Arkansas City, Ark.—City will construct 1½ miles of concrete sidewalks.

Baltimore, Md.—City receives bids until November 6 for about 14,000 square yards grading, curbing and paving with vitrified blocks.

Baltimore, Md.—Frank Novak, 647 N. Kenwood avenue, will grade 35 acres, construct pavements, etc.

Baltimore, Md.—City will macadamize two sections of highway, aggregating 4.26 miles.

Coeburn, Va.—Town will construct sidewalk; length, 5150 feet; width, 18 inches; town will build walk from mill to corporation line, 550 feet; remaining 4600 feet will be constructed at expense of property-owners along route.

Easton, Md.—Talbot county will construct section of State-aid highway on Miles River road, 1.06 miles.

Frostburg, Md.—City will grade and pave 600 feet of First alley and 200 feet of Lucas or Pressman alley.

Lawrenceville, Va.—Brunswick county receives bids until November 12 to construct 83.4 miles of gravel or soil roads.

Marion, Ala.—Perry county receives bids until November 11 to grade, drain and surface with sand-clay four miles of Fikes Ferry road; also until November 25 to grade four miles of Tuscaloosa road; expenditure for each road, \$8000.

Memphis, Tenn.—Shelby county receives bids until November 4 to pave about two miles with asphaltum.

Edward B. Passano of Baltimore, Md., will present a paper on measuring efficiency in manufacturing at the November meeting in New York of the American Society of Mechanical Engineers.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

YEAR ON THE ROCK ISLAND.**Progress and Prosperity Along the System, Although Earnings Declined, Owing to Bad Weather, Etc.**

The Chicago, Rock Island & Pacific Railway Co. has just issued its thirty-second annual report, which covers the fiscal year ended June 30, 1912. Although the results of operation show a decrease as compared with the report of last year, President H. U. Mudge explains that the decline was owing to the almost unparalleled weather conditions during last winter and the extraordinary floods in the spring, as well as the increase of operating expenses consequent therefrom and increases in the pay of employees. That business along the lines is growing is revealed by the records of the industrial department of the company, which show that 128 new industries were located on the system during the year. It is estimated that the operation of these new plants will create an annual movement of more than 54,000 carloads of revenue freight. They will employ more than 5000 men, and their construction will cost about \$13,000,000.

The income statement of the road makes the following exhibit: Average miles operated 8036, increase 10 miles; total transportation revenue \$64,256,255, decrease as compared with last year \$3,783,544; total operating revenue \$64,712,853, decrease \$3,774,619; total operating expenses \$46,759,494, decrease \$2,296,188; net operating revenue \$17,953,359, decrease \$1,478,430; operating income after payment of taxes \$15,200,498, decrease \$1,522,641; total income \$15,887,288, decrease \$1,021,327; balance of income available for dividends after payment of interest and rentals \$3,850,395, decrease \$1,592,317; surplus carried to credit of profit and loss after payment of dividends \$106,635, decrease \$1,405,129; total balance to credit of profit and loss \$14,598,083.

The total assets of the company shown by the balance-sheet are \$354,909,373, increase \$17,685,926. This includes the road and equipment at \$286,586,776.

During the year the company's equipment was increased by the receipt of 60 steel passenger train cars. It also ordered 50 locomotives, 2 steel passenger motor cars, 51 steel passenger train cars (including four horse cars and one business car) and 4940 steel underframe freight train cars, of which total 10 locomotives and 622 freight train cars have been delivered; the balance, consisting of 40 locomotives, 4318 freight train cars, 51 steel passenger train cars and the 2 motor cars, were to be delivered after the date of the report.

The Malvern & Camden Railway (a Rock Island line) was chartered last year in Arkansas, and \$297,097.92 has been advanced to it by the Chicago, Rock Island & Pacific Railway Co. to pay for construction. Tracklaying is expected to begin November 1. The new line will be approximately 60 miles long from Malvern southward to Camden, Ark. It traverses a rich lumber region and will furnish additional service to the two cities at its terminal. At the date of the report, June 30, about 45 per cent. of the grading and bridging was finished.

The tenth annual report of the Rock Island Company for the same fiscal year is also issued. It shows in the combined income account of the Rock Island Com-

pany and the Chicago, Rock Island & Pacific Railroad Co. total income (mainly consisting of dividends from the Chicago, Rock Island & Pacific Railway), \$3,501,677; balance after payment of expenses and taxes (\$89,656); also interest on bonds of the Chicago, Rock Island & Pacific Railroad Co., \$273,384.87; total surplus June 30, \$366,325.11.

MISSOURI, KANSAS & TEXAS.**Annual Report Shows Declines, But Recently Earnings Have Improved.**

To bad business conditions in sections traversed by its lines is ascribed the decrease in earnings of the Missouri, Kansas & Texas Railway Co., which has issued its report covering the year ended June 30, 1912. It will be noted that the heaviest falling off was in passenger earnings, which dropped over \$700,000 as compared with the next preceding year; freight earnings declined only \$83,757, but express earnings fell off more than \$84,000. Transportation costs increased \$238,211, and larger expenditures by some hundreds of thousands were made for maintenance.

The income statement reveals totals thus: Operating revenues \$28,186,719, decrease \$878,574; operating expenses \$21,205,848, increase \$599,333; net operating revenues \$6,980,870, decrease \$1,477,907; balance after payment of taxes \$5,920,688, decrease \$1,532,440; operating income \$5,885,362, decrease \$1,561,162; total corporate income \$6,241,758, decrease \$1,636,459; net corporate income after payment of charges \$17,168, decrease \$1,756,537.

President C. E. Schaff says that the disappointing results were very largely produced by a combination of adverse conditions which has rarely if ever before occurred during any year of the company's history. There was an almost complete failure of grain crops along the lines during the year 1911, this following short crops in each of the next preceding years. There were also severe weather conditions. Passenger earnings were affected by quarantines against an epidemic of spinal meningitis.

The report also notes the acquisition during the year of the capital stock of the Wichita Falls & Northwestern Railway and also of the Wichita Falls & Southern Railway, the former in Oklahoma and the latter in Texas. Together these two roads operate the Wichita Falls lines, extending from New Castle, Tex., to Woodward, Okla., with a branch from Altus, Okla., to Wellington, Tex., altogether 333 miles. From Woodward to Forgan, Okla., 84 miles will soon be completed and in operation. This work was all arranged before the purchase. These acquired lines run through a good farming and mineral country.

Ten Passenger locomotives have recently been ordered for delivery this fall.

Since the beginning of the current fiscal year a notable improvement in the earnings of the company has been observed.

NORFOLK SOUTHERN REPORT.**Progress Along the System—Development of Country—Liberal Expenditures.**

The Norfolk Southern Railroad Co.'s annual report covering the fiscal year ended June 30, 1912, shows total operating revenue \$3,284,824, increase as compared with 1911 \$329,153; total operating expenses \$2,079,324, increase \$246,031; net operating revenue \$1,205,499, increase \$83,122; net revenue after deducting deficit in outside operations \$1,196,704, increase \$73,002; operating income after payment of taxes \$1,106,671, increase

\$53,952; gross corporate income \$1,161,247, increase \$41,747; net corporate income after payment of fixed charges, rentals, etc., \$588,104, decrease \$22,345; surplus after payment of dividends \$268,104, decrease \$102,345.

Concerning the extension of the lines to Charlotte, N. C., the report says that construction is now proceeding from Varena to Colon, N. C., 22 miles, which will link up the Norfolk Southern system via Raleigh with the Sanford & Troy Railroad, which, with other connecting lines, was acquired during the year, as previously reported. Contract has also been let from Mt. Gilead, on the same line, to Charlotte, 53 miles. When this work is completed the company will have a direct route from Norfolk, Va., to Charlotte, and it is believed by the directors that the acquisition of these several lines and the building of the extensions will greatly increase the value of the property as a whole, besides increasing the tonnage over the main line from Raleigh to Norfolk.

The company is paying particular attention to agricultural development. Of this feature of its work the report says: "During the last year the land and industrial department has been actively engaged in an effort to interest progressive people from other States in the great agricultural possibilities of Eastern North Carolina. Exhibitions of farm products from that territory were made at the land shows at both Pittsburgh and New York, and an extensive exhibit was also made at the State Fair at Columbus, O. Five personally conducted homeseekers' excursions were operated during the year, with gratifying results. A substantial number of these homeseekers have since located in this section, and a number of others are making arrangements to do so in the near future. Success has also attended the efforts of this department to encourage the farmers to increase the output per acre."

The company has 608 miles of lines operated, 71 locomotives in service, of which 15 are leased; 124 passenger cars, 3019 freight cars, 3206 company's service cars, of which 341 are leased, and 19 pieces of floating equipment.

The balance-sheet exhibits total assets of \$34,094,740, which includes the road and equipment at \$19,972,591. For maintenance of way and structures an average of \$648.52 per mile was spent during the year, as compared with \$568.78 during the next preceding year.

New Equipment, Rails, Etc.

The Rock Island Lines, according to a late market report, will purchase nearly \$5,000,000 of equipment, including 30 passenger engines, 30 switch engines, 25 freight engines, 10 baggage, 12 smoking, 20 passenger, 18 chair and 8 dining-cars, all steel; 1000 box cars, 500 coal cars, 250 refrigerator cars and 50 cabooses, all to be delivered by August next.

The Illinois Central, it is also reported, is getting prices on 6000 coal cars, and will furthermore purchase additional locomotives and refrigerator cars.

Pennsylvania Railroad has ordered 3000 standard box cars and 1000 automobile cars from the Pressed Steel Car Co., Pittsburgh, and 1000 more box cars will be built in the railroad company's shops at Altoona, Pa. These orders are in addition to 4875 freight cars for which contracts were awarded in June last, making approximately 10,000 additional cars ordered this year. Besides these, 8000 cars have been retired and replaced with new ones.

Charlotte Harbor & Northern Railroad has ordered an eight-wheel locomotive from the Baldwin Locomotive Works, Philadelphia.

Chesapeake & Ohio is reported to have

ordered 3000 coal cars and 1000 other freight cars from the Western Steel Car & Foundry Co., Chicago. The company has also received a car float for use between Newport News and Norfolk; it is of 30 cars capacity, and was built by the Newport News Shipbuilding & Drydock Co.

President John T. Cochrane of the Alabama, Tennessee & Northern and the Tombigbee Valley railroads has just bought an official car named "Mobile" from Hotchkiss, Blue & Co. of Chicago.

Missouri, Kansas & Texas Railway is reported to have ordered 28 passenger cars from the Pullman Company, Chicago.

Central of Georgia Railway, according to a market report, has purchased 300 cars from the American Car & Foundry Co., St. Louis.

The Harriman Lines are reported to have ordered 75,000 tons of rails from the United States Steel Corporation, New York, and 25,000 tons from the Colorado Fuel & Iron Co., Trinidad, Colo.

Charleston & Isle of Palms Traction Co., James Sottile, president, Charleston, S. C., will purchase trolley cars.

Hendersonville Traction Co., W. A. Smith, president, Hendersonville, N. C., is reported to purchase some new equipment.

Missouri Pacific's Hospitals.

The Missouri Pacific-Iron Mountain system has completed the transfer of its hospital funds and property to its employees and officials, who have contributed small sums out of their salaries each month toward the hospital service. The cash thus turned over to them amounts to \$193,767.73. In addition, they receive all the hospital real estate and the furnishings and equipment of the buildings, including the large hospital in St. Louis and its grounds, 300x275 feet. The value of all cash, real estate and furnishings approximates \$250,000, after allowing for depreciation in the value of the St. Louis building, which was erected a number of years ago.

The railroad company started its hospital service about 30 years ago, and the cash and property now on hand have since been accumulated by judicious handling. Probably 90 per cent. of the holdings are the result of small contributions received monthly out of wages of employees now either dead or out of the company's service. It being an impossibility to return the property and cash to the original contributors, the claim was raised that the railroad was entitled to retain them, as the surplus was due to its careful management, and that the present employees had no right to the funds. President B. F. Bush, however, took the stand that the money was paid in for hospital purposes, and that the entire fund and other property should be turned over to the present employees for such purposes, and a resolution authorizing this was passed by the directors. The transfer was completed at the first meeting of the recently-elected employees' board of hospital service managers.

Virginia & Southwestern.

The fourteenth annual report of the Virginia & Southwestern Railway, a subsidiary of the Southern Railway, covers the year ended June 30, 1912, and shows gross operating revenues \$1,757,924, increase as compared with the next preceding year \$364,476; total operating expenses \$1,142,722, increase \$204,580; net operating revenue \$615,201, increase \$159,895; operating income after payment of taxes \$554,952, increase \$152,759; total gross income \$677,383, increase \$197,303; total available income \$619,325, increase \$192,825; balance of income over charges \$266,951, increase \$157,663;

balance carried to credit of profit and loss \$263,692, increase \$154,628; total balance to credit of profit and loss \$610,315, increase \$173,712.

There was received during the year 7 Mikado locomotives, 600 steel double drop-bottom gondola coal cars and 65 steel underframe box cars under equipment trust arrangements.

The Laurel Fork Railway Co. has completed and put in operation about eight miles of line from Elizabethton, Tenn., on the Virginia & Southwestern Railway, to Hampton, Tenn., and it also has under construction a line into large bodies of timber in Carter county, Tennessee.

The general balance-sheet shows the total assets of the Virginia & Southwestern Railway at \$10,543,929, which includes the road and equipment at \$9,572,716 net.

Two New Passenger Stations.

The Southern Railway Co. announces that it will soon erect a handsome new passenger station at Lenoir City, Tenn., and will also enlarge its freight facilities at that point by converting the present combination depot into a freight station. The new passenger depot will have a tile or slate roof. There will be commodious waiting-rooms for white and colored passengers, a ladies' retiring-room and all modern facilities. These improvements are in keeping with the growth of Lenoir City as a manufacturing point.

The Southern will also soon build a handsome passenger station at Buford, Ga., and convert the present station into a freight depot, according to announcement made by H. W. Miller, assistant to the president. The building will be of half stucco finish, with tile roof. Commodious waiting-rooms will be provided for white and colored passengers, a ladies' retiring-room, and all modern comforts. Bids on the work have been solicited from various contractors, and it will be pushed to completion as soon as contract has been awarded and the construction material assembled.

These improvements at both places have been designed to furnish adequate means for handling the present passenger and freight business and for taking care of the increase which is expected.

Dallas-Greenville Interurban.

J. W. Crotty, Dallas, Tex., vice-president and general manager of the Eastern Texas Traction Co., is quoted in a report from there as saying that construction will begin immediately at Garland, Tex., on the electric interurban railway which is to run from Dallas to Greenville, 54 miles. It is expected to be finished within eight months, and the estimated cost is \$1,100,000. Construction crews will work in both directions from Garland. Wm. A. Obenchain, Jr., is chief engineer. Another report says that ground has been broken for the road.

L. C. Davis, engineer representing the Eastern bond syndicate interposed, is reported saying that the road should be operating from Dallas as far as Rockwell within six months. There will be 1500 men engaged on the construction work inside of three months. The first contractors' camp has been established at Garland.

The other officers of the railroad company are Forest E. White of Galveston, president; W. A. Williams, second vice-president; Joseph F. Nichols, third vice-president; L. E. Birdsong, treasurer, all of Greenville; T. A. Miller, secretary; J. L. Coughran, assistant secretary, both of Dallas.

Norfolk Southern's New President.

Charles H. Hix has been elected president of the Norfolk Southern Railroad

Co. to fill the vacancy caused by the resignation of E. T. Lamb, who is now general manager of the Atlanta, Birmingham & Atlantic Railway for its receivers. Mr. Hix, who has been with the Seaboard Air Line for the last 12 years, and who is now its first vice-president and general manager, will take charge of the Norfolk Southern November 1, according to the report from Norfolk which announces his election. He is a native of the South, having been born in Nelson county, Virginia, and is of middle age. His railroad career began in 1880 with the Norfolk & Western Railroad as a member of one of its engineering corps. Soon, however, he was made agent and clerk at Saltville, Va., and advanced in the service to the post of trainmaster and chief dispatcher at Roanoke, leaving that road in 1900 to become trainmaster of the second division of the Seaboard Air Line. With it he has gradually risen to his present high position, which he has held since 1909. He is widely known and popular, and is recognized as one of the ablest of railroad men.

Atlantic & Western Almost Ready.

W. J. Edwards, Lillington, N. C., says: "We are about finishing up an excellent line of railroad from Sanford to Lillington, 26 miles, where it (the Atlantic & Western Railroad) will connect with the Norfolk Southern system, thus making a new through line into Sanford-Jonesboro, N. C. Splendid construction has been pursued throughout; heavy steel rail, standard cross-ties, easy grades and curves, maximum of 1.3 per cent. and 4 degrees, respectively. There are no trestles on the whole line, all having been filled in with heavy culverts, as the construction was done. This is our ninth railroad constructed."

Mr. Edwards is of the firm of W. J. Edwards & Co., railroad specialists, with offices at Sanford, N. C., and Fourth National Bank Building, Atlanta.

B. & O. Statement of Earnings.

The Baltimore & Ohio Railroad Co.'s statement of earnings and expenses (exclusive of outside operations) for September, 1912, shows: Operating revenue \$8,766,371, increase as compared with last year \$487,070; operating expenses \$6,134,567, increase \$680,541; net operating revenue \$2,631,804, decrease \$193,471.

For three months since July 1, 1912: Operating revenue \$25,697,527, increase \$1,806,555; operating expenses \$17,806,061, increase \$1,794,262; net operating revenue \$7,891,466, increase \$12,293.

The foregoing does not include "outside operations," which, as estimated, will show a deficit in net for September, 1912, of \$60,000 compared with a deficit of \$71,401 for September, 1911.

Santa Fe Work at Brownwood, Tex.

Information concerning the work authorized at Brownwood, Tex., by the Gulf, Colorado & Santa Fe Railway has been received from the company as follows:

Construction of six-track freight yard of 50 cars capacity for each track, with necessary tail tracks and cross-overs, and subways under tracks at Austin and Vine streets; estimated cost \$250,000.

Construction of engine, coach and repair yard, track scale and track, septic tank, 24x60 feet; steel water tank and cranes; fuel oil facilities and necessary water, steam and air lines; estimated cost \$169,000.

This, as will be seen, makes a proposed total expenditure of \$419,000.

The Southwestern Water-Works Association will hold its next annual meeting at Fort Worth, Tex.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

The Dunson Mills.

The Dunson Mills, Lagrange, Ga., now in full operation, manufactures and ships



DUNSON MILL VILLAGE.

75,000 pounds of cloth each week. This company was organized with \$500,000 capital stock, and recently completed its plant, of which, with mill village, photographic views are herewith presented. Its main building cost about \$100,000, and is of slow-burning mill construction, 572 feet long by 132 feet wide. Its machinery in-

cotton brought into sight during 55 days of the season was 3,696,254 bales, a decrease under the same amount last year of 132,280 bales. The exports were 1,869,260 bales, a decrease of 170,704 bales. The takings were, by Northern spinners, 201,946 bales, a decrease of 75,903 bales; by Southern spinners, 445,746 bales, an increase of 50,810 bales.

Vance Cotton Mills.

Referring to previously-announced enlargement, the Vance Cotton Mills, Salisbury, N. C., writes to the MANUFACTURERS RECORD as follows:

"We have added a room 56x56 feet, in which we are installing twist-ers. The

impossible to say to what extent the plant will be developed. The machines now installed will give us an output of approximately 500 dozen pair a day."

A \$25,000 Silk Company.

The Dunn (N. C.) Silk Mill Co., capital stock \$25,000, has been incorporated by Samuel Draughon, T. Draughon and C. G. Smith of Dunn, A. E. McNeill and J. W. Johnson of Lillington, N. C., to manufacture silk hosiery, shirts, etc.

Wants Waterproof Cloth.

W. W. Stevens, Mayfield, Ga., wants to buy waterproof cloth or paper for covering lumber, fertilizer, etc.

Textile Notes.

The Dacotah Mills, Lexington, N. C., expect to add 4800 spindles and 200 looms next spring.

The Abingdon Mills, Huntsville, Ala., is replacing old machinery with 20 new Lowell spinning frames, also six new intermediate frames 9x4½ inches.

William P. Hazlewood, Boston and Atlanta, decided to take out the looms in the Verline Mills, Jacksonville, Ala., recently reported purchased by him, and to install 5000 spindles.

The Hartwell (Ga.) Mills writes to the MANUFACTURERS RECORD: "We have in contemplation the doubling of our mill, but this will be some time in the future; probably a year, at least." This company was mentioned last week as reported to double its equipment of 8000 spindles and 200 broad looms.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Tires and Washing Machines.

Richard Mittler, 1 Wiesingerstrasse, Vienna, Austria, writes to the MANUFACTURERS RECORD:

"I am interested in rubber goods, and especially pneumatic and solid tires for all kinds of cars. All offers ought to be in the currency of the different States, including costs of freight and duty, as otherwise business is nearly impossible. American manufacturers will have to allow stocks to their representatives, but they get sufficient security from this representative. Re freights: you will get the better rates in America, because it depends upon the charges steamers will have there and these rates vary conformingly to the circumstances. Concerning duty, I am ready to tell you what is charged for the different articles in the different kingdoms and lands if you will honor me with your inquiries. I am also interested in those machines, American manufacture, for washing paper notes (dollars), and you would oblige me greatly by bringing the content of this letter to the manufacturers of this machine. I feel quite sure that I will be able to sell this machine not only here in Austria, but also in France, England, Germany, and so on."

To Represent Manufacturers.

Renganadham & Co., Karaikudi, India, write to the MANUFACTURERS RECORD:

"I am a trader of the articles noted in the margin. (Semi-rotary pump; colonial lift pump; rotary pump; deep well rotary pump; steam, horse, bullock and hand-power pumps; wrought iron and galvanized tubes and pipe fittings; steel girders, angles and tees; engineering tools; ce-

ment; cement tiles; corrugated and plain zinc sheets; antigraptogormic powder and other building materials; well borers and Abyssinian tube well sinkers.) I shall undertake to accept sole agency for India for any of the manufactured goods of your country. I will be glad to know the terms, with illustrated catalogues. I understand there is an instrument to find out water current underground and at what depth. I will be glad to know the meter or machine and where I can get it or any book which teaches to find out the under-current of water for boring operations."

For Egypt's Trade.

Joseph Oussani, 217 W. 110th street, between Seventh and Eighth Aves., New York, writes to the MANUFACTURERS RECORD:

"My purpose is to establish an agency in Cairo, Egypt. I give you a list of the various manufactures and products I deem suitable for that country: Concrete and concrete machinery, concrete mixers, kerosene engines, gasoline engines, electric-light and generating plants, ice-making plants and machinery, wire fence and poultry netting, pumps and pumping machinery, well driving and drilling machinery, cotton goods, gasoline trucks, cottonseed-oil machinery, cottonseed oil."

Invites Steamship Service.

Antoine D. Charissades, Boite Postale No. 1218, Alexandria, Egypt, writes to the MANUFACTURERS RECORD:

"There is much to be done in our country, not only in the handling of American products, but also in the way of encouraging steam navigation companies. I therefore beg you to give me your counsel as to the possibility of having an agency here for an American steamship line which might be disposed to extend its route to Alexandria. In case of favorable reply I am ready to give you an idea of what the future will bring and also to furnish suitable guarantees."

Wanted for India's Trade.

N. Aspinwall & Co., 40, Soparibag Road, Parel, Bombay, India, write to the MANUFACTURERS RECORD:

"We are interested in merchandise of every description, including iron and steel, metal hardware, colors and paints, cement, machinery and sundries, etc. We are also interested in latest American novelties. We shall thank you if you will kindly introduce to the leading manufacturers."

Hosiery, Underwear, Etc.

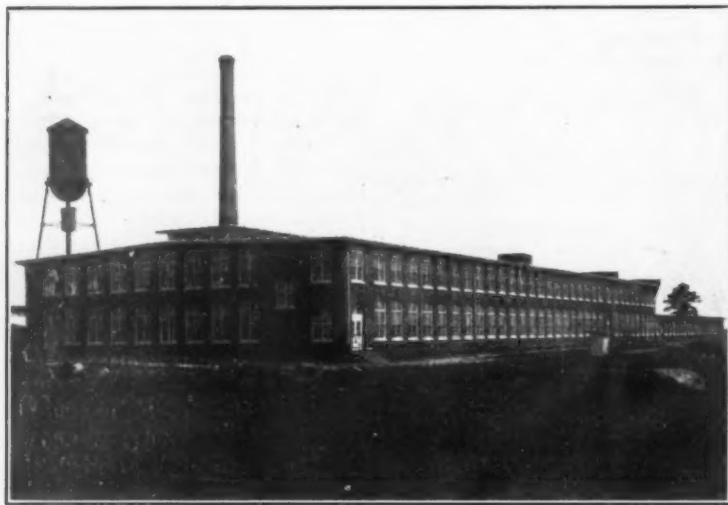
J. Rivero & Co., Allen 77, P. O. Box 3, San Juan, Porto Rico, write to the MANUFACTURERS RECORD:

"Our business is commission agents for different firms in the United States, and we are looking for such lines as hosiery, underwear, dress goods, etc., in one line, and all kinds of canned fruits, meats, vegetables, etc."

To Develop 32,000 Acres.

The Southeastern Kentucky Development Co., Lexington, Ky., has been incorporated with \$150,000 capital stock to develop 32,000 acres of coal and timber land in Clay and Leslie counties. Its incorporators include Louis des Cogenes, C. N. Manning and F. L. Young of Lexington, Thomas R. Gordon and Robert Carnahan of Louisville, D. B. Logan of Pineville, Ky., and S. G. Garrard of Manchester, Ky.

The steamship El Sud of the Southern Pacific Line is reported to have arrived at New York from Galveston on her first trip since her equipment to use oil as fuel under her boilers, she being the first vessel of her fleet to be so equipped. Other steamships of the line are, it is stated, being prepared to burn oil.



THE DUNSON MILLS.

cludes 20,000 spindles, 404 looms, 1200 horse-power steam plant, etc., employing 300 operatives for the manufacture of cotton ducks, drills, twills, sheetings, etc. The company's officers are J. E. Dunson, president; J. M. Barnard, vice-president; T. J. Thornton, secretary-treasurer. J. E. Sirrine, Greenville, S. C., was the engineer-architect in charge of planning and constructing the plant.

The Cotton Movement.

In his report for October 25 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows the amount of

ville, Mass., and will cost approximately \$10,000."

Parker Branch at Frostburg.

Referring to his company's recently-announced branch at Frostburg, Md., H. A. V. Parker, president of the Parker Hosiery Mill and Dye Works, Portsmouth, Va., writes to the MANUFACTURERS RECORD as follows:

"Our building at Frostburg is 45x70 feet, two stories, with basement. We have installed 65 machines and started operation. We will increase the machines as fast as operatives can be taught. It is

MECHANICAL

Safety Devices in Industrial Plants.

The growing tendency to adopt safety devices in industrial plants is indicated by the number of standard safety appliances that are being made by manufacturers of various tools, such as grinders, saws, drills, etc., and also by their extensive application in leading plants. Many such appliances are also devised in the shops in which they are to be used, thus showing the general desire for increased safety.

A notable example of this work is found in the Youngstown Sheet & Tube Co.'s plant, Youngstown, Ohio, in which systematic efforts are made to train the mechanics to use caution and particular care in operating machinery and moving about the works. The first important innovation by this company was the compilation of a set of rules covering all departments which were issued to the foremen, superintendents and skilled workmen. These rules were based on experience, and were intended to prevent accidents similar to those which had previously occurred. Rules and regulations were formulated, and while these are constantly impressed upon the employees by printed signs and otherwise, the company at the same time endeavors to adopt safety devices with which to aid the efforts of the workmen in preventing accidents to themselves and others. Some of the signs are electrically illuminated at night, and the instructions are changed frequently, so that they hold the attention of the employees and form a progressive training. An effort is made to place signs and safeguards at all points in the works where danger apparently exists. The employees are requested to notify their foremen of dangerous places connected with their work. On the electric cranes, framed rules to crane operators are displayed. Similar rules are posted in the barb wire and fence departments, and in the vicinity of specially dangerous tools and machinery.

Considerable expense has been incurred in the installation of guards and shields over gears, shafting, belting and near platforms, stairways, railings, etc., and safeguards are applied wherever deemed necessary and practical. Employees who work in the departments where injuries from flying particles might occur are provided with goggles furnished by the company. All of the employees at blast furnaces, cupolas, and also emery-wheel operators, are furnished with these goggles.

A 64-page booklet, issued by the company, contains rules and regulations for the government of employees. It is entitled "Boost for Safety," and contains illustrations for superintendents and foremen as well as instructions applying to employees of various departments. Separate sets of rules are formulated for each industry, such as the blast furnace, open-hearth, rod and wire departments, Bessemer steel plant, sheet and tube mills, etc.

The company also gives its employees voluntary relief, furnishing the entire amount of money required to carry out the plan, no contributions whatever being made by the employees. Relief funds of various amounts are paid, so that it is not necessary for an employee to seek legal redress for accidents. Single men who have been five years or less in the service of the company receive 35 per cent. of the daily wage they received at the time of the accident. For each additional year of service, 2 per cent. is added. In no case, however, do single men receive

more than \$1.50 per day. Married men who have been in the service of the company five years or less receive 50 per cent. of the daily wage that they were paid at the time of the accident. For each additional year of service above five years, 2 per cent. is added to the relief. For each child under 16 years, 5 per cent. is added, but in no case is this relief to exceed \$2 per day. The following relief is paid for permanent disability: For loss of a hand, 12 months' wages; for loss of an arm, 18 months' wages; for loss of a foot, 9 months' wages; for loss of a leg, 12 months' wages, and for the loss of one eye, 6 months' wages. In the case of married men, fatally injured, who have been in the service of the company five years or less and leaving widows or children under 16 years of age, the company will pay relief to an amount equal to 18 months' wages. For each additional year of service above five years, 3 per cent. is added to the relief, and for each child under 16 years, 10 per cent. is added. In no case, however, is this death relief to exceed \$3000.

A commemorative medal has been awarded to the company by the International Exposition of Hygiene held at Dresden, Germany, for its exhibition of accident prevention signs, devices, etc. This exhibit consisted of a large number of photographs taken in various departments of the works, and contained specimens of enameled signs, together with a few models of some of the more important accident prevention devices.

Recording Electric Speed Indicator.

The desirability of knowing the speed of vehicles, machinery or shafting at any time is now so generally required that a variety of instruments for this purpose have been brought out from time to time.

The electric speed indicator for such uses consists of a magneto-generator and a direct-current measuring instrument. The magneto is attached to a pulley or shaft of the apparatus the speed of which is to be measured. Since the voltage of the magneto-generator is proportional to its speed, the meter, properly calibrated, indicates the speed directly at any time. When operating at 1000 revolutions per minute the magneto-generates 25 volts, so that the meter may be calibrated for any unit, as revolutions per minute, cycles per second, percentage fast or slow or feet per minute.

On account of the ease with which these indicators may be adapted to the many types of machinery, they have a wide field of application. The meter may be mounted at a distance from the indicator, so that it is possible to place a number of the meters together, making it possible for those in charge to note the efficiency of the work in various departments at any time. In connection with newspaper presses, the application is to note the number of copies being printed at any time or the total number of an edition.

Another important use for speed indicators is for determining the speed of trains or electric cars. The indicator may be attached to the axle, and when the meter is adjusted to prevent jar it will give the speed of the car at all times.

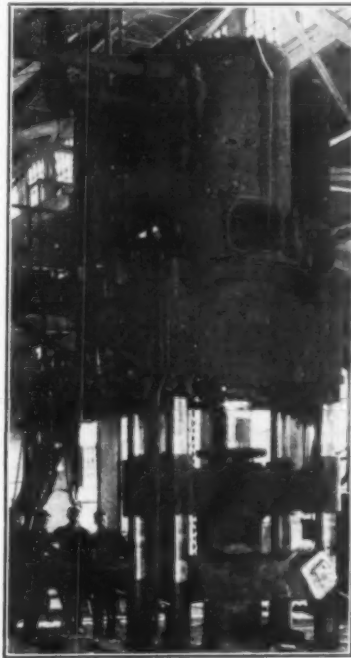
The ability to have a complete record of the operation of the machine is made possible by the use of a graphic meter in connection with the magneto. This use will prove especially beneficial where a test of efficiency of a piece of apparatus is desired. For railway trains, such a meter is a good indicator as to whether or not instructions have been carried out regarding the speed along the line. The large number of railroad wrecks that have occurred within recent years due to fail-

ure to comply with speed orders has brought the need of such a device more prominently to the notice of railroad officials.

The indicator is small, and can be placed anywhere near the machine, the over-all dimensions being only 6x10x10 inches, and a variety of meters may be used with it. The magneto-generator is manufactured by the Holtzer-Cabot Electric Co., Brookline, Mass., and is designed for use with meters manufactured by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

Steam Hydraulic Forging Presses.

Makers and users of heavy forgings are realizing the value of presses for heavy work. This value is due to the fact that the slow pressure of the press treats inside and outside of the material, so that



MESTA HANIEL & LUEG PRESS.

the forging is of the same consistency throughout. Besides this, there is no loss of energy in the press from vibration of foundations, etc., since the pressure is constantly applied and no jolting shocks are made.

While hydraulic accumulator presses have been in use in the United States for many years, the steam hydraulic, or direct acting intensifier press, is of recent origin, and has been developed in Europe. The success of this type in Europe has caused several American manufacturers to take up this class of work, and the Mesta Machine Co. of Pittsburgh has introduced a type which in accessibility and straightness of force action is said to equal the steam hammer.

This press was originated by the firm of Haniel & Lueg of Dusseldorf, Germany. The exclusive right for building it in the United States and in Canada was acquired two years ago by the Mesta Machine Co., together with valuable engineering and manufacturing information.

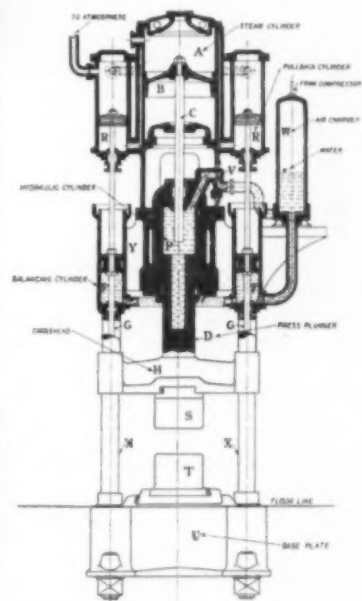
One of the illustrations shows two of the presses built by the Mesta Machine Co. for general forging purposes. The operating lever for the large press is shown at the left of the picture. It will be noticed that the press is accessible from all sides for the use of shear tools, die holders, etc.

The other illustration shows a front elevation of the press, with sectional view of the cylinders. The press consists of a heavy base U, four columns X and the stationary crosshead Y, which contains

the hydraulic cylinder P and hydraulic balancing cylinders F. The pistons of the balancing cylinders F are connected to the movable crosshead H by the piston rods G. The pistons of the steam cylinders R are connected to the extension of piston rods G. The air chamber W is partly filled with water, and is connected to hydraulic cylinder P with check valve V in the connecting pipe. The balancing cylinders F are connected directly to the air chamber. A is a single-acting steam cylinder. T and S are the top and bottom dies.

In operating the press the hydraulic cylinder P, balancing cylinders F and about one-third of air chamber W are filled with water. The air chamber is then pumped up to a pressure of about 100 pounds, which is sufficient to move piston rod C and piston B to the top of steam cylinder A when there is no pressure in the steam cylinder. The pressure on plunger D is always balanced, as the area of the two cylinders F is equal to the area of cylinder P. By admitting steam to cylinders R the crosshead H, which contains die S, can be moved upward to any point by lifting check V and allowing water from cylinder P to flow into air chamber W. When die S is at the proper height check valve V is closed. The press is then ready to take the piece to be forged between the dies S and T. By admitting steam to cylinder A, the piston rod C is forced into cylinder P, which gives the necessary pressure to do the forging. As soon as the steam is exhausted from cylinder A, piston B and crosshead H automatically move their positions ready for the next stroke.

The accessibility of this press and the small requirement of floor space is coupled with only a slightly greater requirement for headroom, as shown by the illustration. In outward appearance the press resembles a steam hammer with the heavy



VERTICAL SECTION OF PRESS.

foundations eliminated. The press forces are self-contained, so that it may set on beams if necessary. A linkage system is supplied to these presses for the purpose of making the motion of the upper pressure die follow the motion of the operator's hand. This system offers the additional advantage that it utilizes the inertia in the moving parts. These presses are in general use for flanging processes, and the trend toward simplicity and direct action opens a wide field in this direction to the steam hydraulic press. This type of press can be adapted to many other uses which will readily present themselves to operators of forging machinery.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Ala., Gadsden.—Gadsden, Alabama City and Etowah county will construct steel bridge across Black Creek to cost about \$2500. Charles L. Marsh, City Engineer of Gadsden.

Ark., Batesville.—Independence County Commissioners are arranging to construct bridge across White River, to cost about \$150,000.

Ark., Dalton.—Randolph county will construct bridge across Eleven Point River at Dalton. Address County Commissioners, Pochontas, Ark.

Ark., Fort Smith.—St. Louis & San Francisco Railway, M. C. Byers, chief engineer, Springfield, Mo., will, it is reported, construct bridge across Arkansas River between Fort Smith and Van Buren, replacing present wooden structure; steel construction; also construct bridge across Arkansas River at Tulsa, Okla.; Red River at Arthur City, Tex.; Verdigris River at Afton, Okla., and Frog Bayou at Mountainburg, Ark.; plans and specifications completed; Mr. Byers wires Manufacturers Record: "Steel in Fort Smith-Van Buren and Arthur bridges to be renewed with heavier materials, amounting to 6000 tons; T. J. Powell, St. Louis, Mo., has sent out bids for steel; very few changes in present masonry; erection by company's force."

Ark., Provo.—Commissioners Sevier and Howard counties awarded contract to construct two steel bridges across Saline River, one at Provo to Burkett Bridge Co. at \$2145 and other at Fort Towson to Vincennes (Ind.) Bridge Co. at \$2440.

Ky., Louisville.—Park Commissioners awarded contract to National Concrete Co. of Indianapolis, Ind., at \$3150 to construct bridge over Beargrass Creek near Castlewood; board will also construct bridge to replace bridge No. 1 in Cherokee Park.

La., Shreveport.—City Council and Bossier Parish Police Jury awarded contract to Modern Steel Construction Co. of Waukesha, Wis., at \$168,330 to construct superstructure of steel and reinforced concrete bridge across Red River between Shreveport and Bossier City; substructure completed; total cost completed estimated at \$300,000; Hedrick & Cochrane, consulting engineers, 1118 McGee St., Kansas City, Mo. (Call for bids lately noted.)

Md., Baltimore.—Board of Estimates instructed Calvin W. Hendrick, chief engineer of Sewerage Commission, American Bldg., to proceed with immediate construction of proposed viaduct on Fallsaway from Madison to Chase St.; width, 50 feet on roadway and 12½ feet on each side of sidewalk, making total width of 75 feet; length, 1500 feet; hollow reinforced concrete construction; estimated cost \$225,000.

Md., Easton.—Talbot County Commissioners will construct bridge across Miles River between Easton and Unionville; 1000 feet long; concrete construction; bids received until November 12; Joseph B. Harrington, clerk. (See "Machinery Wanted.")

Miss., Meridian.—P. C. Powers & Son, Memphis, Tenn., are lowest bidders at \$13,090 to construct concrete culvert. City previously noted to issue \$10,000 worth of bonds for bridges, culverts, etc.)

Miss., Paulding.—Districts Nos. 1, 2 and 3 of Jasper county will each vote November 5 on \$25,000 bond issue for road construction, and district No. 4 on \$35,000 bond issue for road construction. Address County Commissioners.

Mo., Bismarck.—Bismarck, Bellevue Val-

ley and Tarrant Construction Co. of Fort Worth at \$106,772.17 to construct bridge across river at 7th St.; former will be 1752 feet long and latter 1041 feet; Brenneke & Fay of St. Louis, Mo., are engineers for both structures. (Particulars lately noted.)

Tex., Sherman.—Grayson county votes November 5 on tax levy for construction of concrete bridges and culverts throughout county. Address County Commissioners.

Va., Isle of Wight.—Isle of Wight county will construct bridge across Jones Creek; 215 feet; bids opened at office of Clerk November 6; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

Tex., Waco.—McLennan County Commissioners awarded contract to Austin Bros. of Dallas, Tex., to construct two steel spans on concrete piers 24x108 feet and 24x72 feet, respectively; cost \$14,000; W. T. Lockwood, County Auditor. (Call for bids lately noted.)

CANNING AND PACKING PLANTS

Ky., Louisville.—Dixie Canning & Preserving Co., capital stock \$50,000, organized with J. Etley, president; John F. Hagan, vice-president, and Alfred Rose, secretary-treasurer; will establish plant.

Md., Baltimore.—John Boyle Company, Wolfe and Thames Sts., is having plans prepared by Theodore Wells Pietsch, American Bldg., Baltimore, for addition to oyster and fruit-packing plant; four stories; steel and mill work; 11,000 square feet floor space; for storage-house and addition to manufacturing facilities.

Tex., Stowell.—Brown Fig Co. contemplates erecting larger plant for next year's crop; will install additional boiling kettles, operated by steam.

ber Co., capital stock \$1,200,000, incorporated by E. E. McWhiney, W. J. Maloney and N. P. Coffin of Wilmington, Del.

Ky., Lexington.—Southeastern Kentucky Development Co., capital stock \$150,000, incorporated by Louis des Cognets, C. N. Manning and F. L. Young of Lexington, Thos. R. Gordon and Robert Carnahan of Louisville, Ky.; D. B. Logan of Pineville, Ky., and others; will develop 32,000 acres coal and timber land.

Mo., Gilman City.—Gilman Black Diamond Coal Co., capital stock \$2800, incorporated by W. G. Davisson, C. O. and B. S. Hagerty, J. H. Prindle, J. A. McCray, D. E. Fair and others.

Tex., Houston.—Dow Coal Co. increased capital stock from \$150,000 to \$200,000.

W. Va., Clarksburg.—Rich Mountain Coal Co. and Alexander & Western Railroad will, it is reported, consolidate coal and railway properties, including 14,000 acres coal and timber land; plans are said to contemplate extensive developments; Rich Mountain corporation wires Manufacturers Record: "No change yet; when we have any developments will advise you."

W. Va., Chaffee.—Chaffee Coal Co. will make improvements and has begun construction; betterments to include reconstruction of two collieries, erection of screening plant and picking table, installing gasoline power to replace mules and rope haulage, etc.; is developing 9000 acres; annual output 100,000 tons, and report states will increase to 200,000 tons for next year.

W. Va., Seng.—Spruce Valley Coal Co., capital \$50,000, incorporated by P. T. Colgan, A. C. Carr and W. E. Cabell of Middlebourne; John Willis and G. Himmelherber of Gravity, W. Va.

CONCRETE AND CEMENT PLANTS

Ala., Robertsdale.—Roof Tile.—Alabama Concrete Roof & Tile Co., capital stock \$25,000, incorporated; Robert Trechsel, president; James E. Dunlop, secretary-treasurer.

Ala., Demopolis.—Alabama Portland Cement & Lime Co., S. C. McCurdy of El Paso, Tex., vice-president, will enlarge capacity of plant; improvements include installation of kiln 175 feet long by 10 feet diameter, turbine and electric generator; change from dry to wet process; additional tube mill has been received; E. Posselt, consulting engineer.

Va., Norfolk.—Portland Cement.—Norfolk Portland Cement Co. is reported as to reorganize and install machinery increasing daily capacity from 2000 to 2500 barrels.

COTTON COMPRESSES AND GINS

Ala., Pollards Bend, P. O. at Leesburg.—Cherokee County Gin Co., capital stock \$3000, incorporated by J. W. Livingston, C. C. Knighton, J. M. Hannah, John L. Duke and others.

S. C., Bennettsville.—Marlboro Cotton Association, A. J. Matheson, Jr., president, will establish cotton compress to cost \$30,000.

Tenn., Jackson.—Ajax Ginning Co., capital stock \$8000, incorporated by P. Rand, L. N. Hine, L. F. Jackson, John Myers and W. B. Dashiell, Jr.

Tenn., Mason.—C. T. McCraw & Co., Braden, Tenn., will rebuild plant recently noted burned; erect 30x60-foot frame and corrugated galvanized iron structure; construction by company; cost of gin and mill machinery (contract let) about \$4000.

Tex., Abilene.—H. B. Smith will rebuild cotton gin recently reported burned at loss of \$3000.

Tex., Santa Anna.—L. L. Shield will build cotton compress and cottonseed-oil mill.

COTTONSEED-OIL MILLS

Ga., Davisboro.—Planters' Oil & Fertilizer Co., capital stock \$40,000, incorporated by L. B. Holt, O. H. P. Beall, W. J. Henderson and B. W. Holt; has purchased plant of Old Dominion Cotton Oil & Guano Co. and reorganized same.

Tex., Santa Anna.—L. L. Shield will build cottonseed-oil mill and cotton gin.

DRAINAGE AND IRRIGATION

Fla., Starke.—H. E. Lagergren completed survey for determining number of cubic yards to be removed in excavating canals in East Starke drainage district; canals are natural water-courses straightened, widened

PROPOSAL ADVERTISEMENTS

IN THIS ISSUE ARE

PUBLISHED ON PAGES 84 and 85

In order to secure best bids from leading engineers, contractors and investment houses, the proposal advertising columns of the Manufacturers Record are invaluable.

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Proposal Advertising forms close Wednesday, 10 A. M.

ley & Western Railway will construct bridges varying in length from 150 to 300 feet and trestles from 25 to 40 feet; H. Rohwer, consulting chief engineer, 609 Fullerton Bldg., St. Louis, Mo.

Mo., St. Louis.—Conzelman-Crunden Company will build steel bridge at 749 S. 2d St.; cost \$5000.

Tenn., Nashville.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., awarded contract to Foster-Creighton-Gould Company of Nashville, Tenn., to construct all bridges on railroad between Winchester and Athol, Ky.; 5000 tons of steel; largest bridge, across Red River, 1800 feet long and 200 feet high; two structures across Kentucky River; Virginia Bridge & Iron Co. of Roanoke, Va., will furnish metal required.

Tex., Austin.—City awarded contract to K. V. Dixon, Austin, at \$1085 to construct 20-foot span with 25-foot roadway; also will construct two other bridges, one reinforced concrete culvert, 25-foot span, 110 feet long, cost \$3000; third bridge will have two or three spans, 110 feet long, reinforced concrete, cost \$3200; date of opening bids for these structures not determined; G. S. Iredell, City Engineer. (City recently noted to erect three bridges.)

Tex., Boston.—Bowie and Cass counties will construct steel wagon bridge over Sulphur River on road leading south from Maud to Douglassville; plans and specifications prepared. Address Bowie County Commissioners at Boston or Cass County Commissioners at Linden, Tex.

Tex., Fort Worth.—Tarrant County Commissioners awarded contract to Hannan-Hickey Bros. Construction Co. of St. Louis, Mo., at \$373,948.55 to construct reinforced concrete bridge across Trinity River at Main

CLAYWORKING PLANTS

Ga., Columbus.—Bricks.—R. B. Small Company will improve and enlarge plant; has erected clay storage shed; will build four additional kilns and install automatic steam shovel.

Mo., Joplin.—Bricks.—John J. Robaczewski, Detroit, Mich., plans to establish brick works.

Mo., St. Louis.—Bricks.—Hydraulic Press Brick Co. purchased 100 acres clay land; reported purchase price \$250,000; plans to utilize deposit at plant already in operation.

N. C., Hot Springs.—Bricks.—Red Shale Brick Co. will establish plant to manufacture shale building and paving brick; daily capacity 45,000; erect temporary wood structure, to be replaced with brick; construction by day work; machinery contract let; cost of machinery \$4900; J. W. Rutherford, president; A. N. Penland, vice-president; J. N. Jarrett, secretary-treasurer; W. A. Reynolds, manager. (Under N. C., Asheville, recently noted incorporated.)

COAL MINES AND COKE OVENS

Ala., Margaret.—Alabama Fuel & Iron Co., Brown-Marx Bldg., Birmingham, Ala., will develop additional slope; present output, 2000 tons of coal; at Acmar plant, 1500 tons; present plans include increased output of 1000 tons, making total capacity 4500 tons for both mines; will increase capacity of electrical plant at Colgate, extending transmission lines and furnishing power to three mines at Margaret, as well as at Acmar and Colgate washer plant; total expenditure, including additional development at Margaret, \$100,000. (Recently noted at Birmingham, Ala.)

Kentucky.—Eastern Kentucky Coal & Tim-

and deepened; 16 in district; staked lines measure 24 miles.

Fla., Tallahassee.—Drainage Commissioners State of Florida will soon invite bids on construction of fourth of Everglades drainage canals to extend from West Palm Beach to Lake Okeechobee; bottom width of canal at Lake Okeechobee will be 70 feet and at West Palm Beach 80 feet; top measurements will average 100 feet; canal will drain entire property north of Lauderdale section, except that drained by Cypress Creek Canal; latter will be seven miles long, and contract for its construction has been awarded to Miami (Fla.) Engineering & Construction Co.; construction has begun on other two canals, known as Snake Creek and Snapper Creek canals; former will connect with Royal Glade Canal, recently completed by Everglades Lands Sales Co. west of Fort Lauderdale; latter will drain territory in vicinity of Fulford; F. C. Elliott, acting chief drainage engineer. (Further facts previously noted.)

Georgia.—J. V. Phillips, drainage engineer, United States Department of Agriculture, Waycross, Ga., states field survey for Astoria drainage district near Waycross is completed; plans now to be made and delivered over to district commissioners for their consideration. (Recently noted.)

La., Lake Charles.—Cameron Drainage District, B. F. Rutherford, president (recently noted to vote \$50,000 bond issue about November 6), will drain 95,000 acres land in center of Cameron parish; 12 miles 25x5-foot canal; cost \$38,000; T. H. Mandele, Lake Charles, engineer in charge.

Miss., Moorehead.—Moorehead drainage district (previously noted as having plans prepared by Washburn & Cove, engineers, to construct large open ditches as mains for the drainage) will let contract November 12 for about 600,000 yards ditch excavation; work to be let in three contracts, Nos. 1, 2 and 3, of 250,000, 150,000 and 200,000 yards, respectively; plans and specifications on file with attorneys at Moorehead, at Chancery Clerk's office, Indianola, Miss., and with Engineering & Contracting Co., Chicago, Ill.; full information obtainable from Southern Engineering Co., Clarksdale, Miss. (See "Machinery Wanted.")

Tex., Plainview.—R. W. O'Keefe purchased 160 acres land and will install irrigation system.

ELECTRIC PLANTS

Ark., Marshall.—City granted franchise to Redman, Stephens & Co. to construct electric-light plant.

Ga., Camilla.—City voted \$10,000 bond issue to improve electric-light plant and water-works. Address The Mayor.

La., Donaldsonville.—Municipal Light and Water Commission (recently noted to make improvements to plant) has contracted for electric-driven rotary pumps to replace steam. (See "Water-works.")

La., Morgan City.—City awarded contract to J. W. Taylor of New Iberia, La., at \$9700 to erect power-house.

La., New Orleans.—Electrical Development Co., capital stock \$10,000, incorporated; Lyman C. Reed, president; D. H. Holmes, vice-president; C. B. Murphy, secretary-treasurer.

Md., Rising Sun.—City Commissioners granted franchise to Hugh T. Downing to construct electric-light plant and water-works.

Md., Rockville.—Potomac Electric Power Co. will extend electric-light system from Rockville to Gaithersburg, Md.; also construct branches to Derwood, Washington Grove and Oakmont; 12 miles of pole lines.

Miss., Pickens.—City contemplates \$1500 bond issue to construct electric-light plant; W. S. Pierce, Mayor.

Mo., Fredericktown.—City receives bids November 6 for construction of electric-light plant; Fuller-Coult Company, Chemical Bldg., St. Louis, Mo., engineer; \$12,000 bond issue recently noted voted. (See "Machinery Wanted.")

Mo., Clayton.—Paul D. Cable, Fred R. Mott and others are reported as interested in company which will apply to County Court for franchise to supply electricity in St. Louis, Franklin and Jefferson counties.

N. C., Gastonia.—City votes November 30 on \$2500 for electric-light system. Address The Mayor. (See "Road and Street Work.")

N. C., Newbern.—Board of Aldermen rejected bids for erection of power plant and instructed engineer to modify plans so as to reduce cost; bids will again be invited. (Recently mentioned.)

Okla., Muskogee.—City will vote November 18 on granting of new franchise to Muskogee Gas & Electric Co.

Okla., Tulsa.—Union Traction Co. applied to City Council for franchise to furnish electricity for lighting and power.

Okla., Tulsa.—City Council is considering granting of franchise to Sand Springs Interurban Railway Co. to furnish electricity for lighting and power.

S. C., Pendleton.—Pendleton Electric Light Co., capital stock \$5000, incorporated by E. N. Sifton, L. E. Sifton and C. S. Chrelitzberg.

Tex., Abilene.—N. W. Halsey Company of New York purchased (for \$600,000) electric, gas, water and ice properties in Abilene operated by Abilene Light & Water Co., Abilene Gas, Light, Fuel & Power Co. and Abilene Ice Co.; plans \$100,000 expenditure for improvements.

Tex., Brady.—City votes November 16 on issuance of \$42,250 of bonds for purchase of Brady Water & Light Co.'s light and water plant. Address The Mayor. (Recently mentioned.)

Tex., Eagle Pass.—Texas Power & Light Co., J. F. Strickland, president, Dallas, Tex., purchased Texas-Mexican Electric Light & Power Co.'s electric-light plant at Eagle Pass.

Tex., Graham.—Graham Light & Power Co. will install electric-light plant to cost \$10,000.

Tex., Houston.—Houston Electric Co. increased capital stock from \$3,000,000 to \$4,000,000, as lately mentioned; provides for extensive enlargements and improvements recently announced; construction in charge of Stone & Webster Engineering Corporation, 147 Milk St., Boston, Mass. (Previously reported.)

Tex., Paducah.—City granted franchise to Lon Gresham of Dallas, Tex., to construct electric-light plant; capacity not less than 1000 lights.

Tex., Taylor.—Texas Power & Light Co., J. F. Strickland, president, Dallas, Tex., purchased Citizens' Light & Power Co.'s plant for \$100,000.

FERTILIZER FACTORIES

Ga., Davisboro.—Planters' Oil & Fertilizer Co., incorporated by L. B. Holt and others. (See "Cottonseed Oil Mills.")

Ga., Quitman.—Empire Cotton Oil Co., Atlanta, Ga., awarded contract to D. C. Allen, College Park, Ga., to erect buildings for fertilizer plant lately announced; mill construction; cost \$5000; Hancock-Holmes Foundry & Machine Works of Atlanta, engineers in charge; cost of machinery (purchased), \$2500; daily capacity, 300 tons.

S. C., Greenwood.—Greenwood Fertilizer Co., capital stock \$20,000, incorporated by W. S. Glenn, I. E. Harris and H. E. De Pass, all of Spartanburg, S. C.

Va., Baskerville.—Mecklenburg Farmers' Union Fertilizer Co., capital stock \$75,000, incorporated; president, Ralph Jessup; secretary-treasurer, C. M. Gordon; both of Baskerville; vice-president, J. J. S. Cook of La Crosse, Va.

FLOUR, FEED AND MEAL MILLS

Ala., Center.—Stinson Milling Co., capital stock \$10,000, incorporated by W. A. Stinson, S. G. Stinson, Emory Jordan and John A. Lee.

Ala., Montgomery.—H. M. Hobbie Grocery Co. will establish alfalfa mill; building erected.

Tenn., Columbia.—Columbia Grain Co., E. E. Lemore, president, 1118 First National Bank Bldg. (recently noted incorporated with \$10,000 capital stock), will deal in grain; no building; operate through public elevators.

Tex., Kerrville.—Charles Schreiner awarded contract to Bruno Schott of Kerrville to erect flour mill for Kerrville Roller Mills; fireproof construction; cost \$14,000; plans by Southern Mill Construction Co., Houston, Tex. (Recently noted.)

Va., Curdsville.—C. C. Harvey states recently-noted flour mill is completed and in operation; machinery purchased.

W. Va., Palestine.—L. P. Spangler will make improvements to roller mill in spring; install water-wheel, gearing, piping, etc.

FOUNDRY AND MACHINE PLANTS

Ala., Anniston.—Piping.—McWane Pipe Works, Lynchburg, Va., awarded contract to Virginia Bridge & Iron Co., Roanoke, Va., to erect main building for pipe works; 235x115 feet; steel fireproof construction; will install electric motors, cupolas, blower, etc., for daily capacity 200 tons gas and water pipe. (Recently mentioned.)

Ala., Boyles.—Pipe.—National Cast-Iron Pipe & Foundry Co. incorporated with \$5000 capital stock and privilege of increase to

\$300,000; has 50-acre site; will build plant with daily capacity 150 tons finished water and gas mains, 4 to 30 inches; president, A. H. Ford; vice-president and general manager, E. E. Linthicum; secretary-treasurer, A. E. Nelson; all of Birmingham, Ala. (Recently reported to be incorporated, etc.)

Ala., Montgomery.—Heating Plants, etc.—Fulzer Manufacturing Co., capital stock \$50,000, incorporated to manufacture heating and ventilating plants; R. Hugger, president; C. F. Gallier, secretary-general manager.

Ga., Atlanta.—Gas Power Plants, etc.—Standard Gas Power Co. will reorganize and increase capital stock from \$100,000 to \$2,500,000; establish headquarters at Boston or New York, with Southern headquarters at Atlanta; continue manufacturing gas power plants, principally Akerlund gas producer; market Legg gas-fired brick kilns, manufacture furnace gas products for burning brick, steel and glass furnaces, etc.; branch department manufactures Gibbs gas engines for marine purposes at Jacksonville, Fla.; reorganization planned by M. H. Kelly, 149 Tremont St., Boston, Mass., who recently purchased control.

Ga., Dalton.—Stoves.—J. T. Weathers of Atlanta, Ga., purchased plant of Mascot Stove & Manufacturing Co.

Mo., Joplin.—Machinery.—Swan Machinery Co., capital \$75,000, incorporated by W. A. Swan, C. G. Boyer and A. T. Swan.

Mo., Joplin.—Plow Pullers.—Dr. Sam Jones, Fredonia, Kans., plans to establish works for manufacturing plow pullers.

Mo., St. Louis.—Castings.—Tower Grove Foundry Co. will build one-story foundry at 451-453 Race Course; cost \$3900.

Tenn., Nashville.—Heating Furnaces.—International Heating Co. will open bids in about 30 to 60 days to erect plant; plans not fully determined; manufacture heating crates and double radiating hot-air furnaces; H. M. Grubbs, president; Walter M. Grubbs, secretary; B. B. Coffey, manager. (Recently noted incorporated.)

Tex., Dallas.—Engines.—Bessemer Gas Engine Co., capital stock \$10,000, incorporated by R. J. Torrance, C. H. Bishop and John Carruthers.

Tex., Victoria.—Safes and Locks.—Victoria Safe & Lock Co. purchased site for \$11,000 on which to build addition to plant.

Va., Richmond.—Stoves.—Cameron Stove Co. increased capital stock from \$65,000 to \$90,000.

Va., Roanoke.—Iron Works.—Roanoke Iron Works will erect additional buildings and install electric hoists; construction by company.

W. Va., Wheeling.—Molding.—Center Foundry & Machine Co. has completed proposed improvements; increased floor space; erected new building for cleaning castings and assembling; installed individual motors and increased cupola capacity, etc.

GAS AND OIL DEVELOPMENTS

Ala., Hartselle.—R. L. Kennedy, representing Rock Oil Co. of Brooklyn, N. Y., secured leases on 10,000 acres and will drill test wells.

Ky., Lexington.—Extension Development Co. will develop 3500 acres of gas and oil property in Ohio and Grayson counties; T. C. Rush, president and treasurer; E. P. Taylor, vice-president and general manager; F. J. Fols, secretary and consulting engineer, 416 Rose La., Lexington. (Recently noted incorporated under "Land Developments" with \$25,000 capital stock.)

La., Houma.—C. W. Herral of San Antonio, Tex., and C. E. Barret of Houston, Tex., purchased 500 acres land on Little Caillou, in Terrebonne parish, for \$5000; will drill for oil and gas.

Mo., Moberly.—Moberly Oil Co., capital \$8000, incorporated by E. H. Gamble, C. E. and C. M. Ripple, W. W. Fountain, R. P. Gamble and C. G. Elliott.

Okla., Oklahoma City.—Kansas Natural Gas Co., Conway F. Holmes, receiver, Kansas City, Mo., plans completion of pipe line, under construction, to new gas wells in Glenn Pool field; report states \$300,000 expenditure required.

Okla., Oklahoma City.—King Oil & Gas Co., capital stock \$6000, incorporated by A. E. King and W. N. Hayes of Oklahoma City and L. P. King of Wellston, Okla.

Okla., Sulphur.—Sulphur Oil & Development Co., capital stock \$10,000, incorporated by T. B. Laumann and L. H. Laumann of Oklahoma City, Okla., and A. B. Hugos of Enid, Okla.

Okla., Tulsa.—Anteten Oil & Gas Co., capital \$10,000, incorporated by Nathan Martin, Abraham Levine and John Glass Catlet.

Tex., Houston.—Bay Shore Oil Co., capital stock \$30,000, incorporated by E. A. Sterling, J. C. Montgomery and T. H. Bass.

W. Va., Brooke County.—Cambridge Oil & Gas Co., capital \$10,000, incorporated by A. D. Barnes, T. E. Cook, G. M. Lanning, Harvey Stone, C. E. Eward and H. L. Walton, all of Cambridge, O., and others.

W. Va., Charleston.—Falling Rock Oil Gas Co., capital stock \$22,000, incorporated by James Rodgers, Edgar Riggs, C. E. Champe, W. A. Kennedy and Will Flagg.

W. Va., Charleston.—Bull Moose Oil Co., capital stock \$100,000, incorporated by W. T. Johnson, L. L. Gray, J. Howard Hundley, C. M. Alderson and Frank McKnight.

W. Va., Sutton.—Rosedale Oil & Gas Co., capital \$24,000, incorporated by H. M. Turner, C. N. Snodgrass, S. C. Turner and J. E. Carroll of Rosedale, W. Va., and H. A. Harman of Sutton.

ICE AND COLD-STORAGE PLANTS

N. C., Fayetteville.—Fayetteville Ice & Manufacturing Co. will install additional ice machine; equipment purchased; capacity of plant, 50 tons.

S. C., Union.—Union Ice & Fuel Co. (recently noted incorporated with \$12,000 capital stock by R. A. Easterling and others) will open bids about November 15 to erect 15-ton ice plant; galvanized corrugated-iron construction; cost of machinery, \$8000; officers not elected. (See "Machinery Wanted.")

Tex., Abilene.—N. W. Halsey Company of New York purchased (for \$600,000) ice, water, gas and electric properties in Abilene operated by Abilene Light & Water Co., Abilene Gas, Light, Fuel & Power Co. and Abilene Ice Co.; plans \$100,000 expenditure for improvements.

Tex., Port Arthur.—Port Arthur Ice & Refrigerating Co., capital stock \$100,000, incorporated by Walter N. Munroe and Edwin J. Emerson of Beaumont, Tex., and C. W. Kellogg, Jr., of Dallas, Tex.

IRON AND STEEL PLANTS

Ala., Bessemer.—Iron Furnaces.—Sloss-Sheffield Steel & Iron Co., Birmingham, Ala., will, it is rumored, construct additional furnaces; wires Manufacturers Record: "No truth in rumor regarding building additional furnaces at this time."

Ala., Sheffield.—Iron Furnace.—Sloss-Sheffield Steel & Iron Co., Woodward Bldg., Birmingham, Ala., has blown in Hattie Ensley Furnace; \$100,000 expended for repairs. (Previously mentioned.)

W. Va., Wheeling.—Steel Sheets, etc.—Whitaker-Glessner Company is proceeding with installation of proposed two new hot mills for rolling short sheets and black plates for tinning, and contemplates operation of these mills within about three weeks.

LAND DEVELOPMENTS

Ala., Eden.—Eden Development Co. (A. Dewey Smith and F. W. Dixon) will develop 10,000 acres of land near Eden, St. Clair county, and in Wilcox county, near Pineapple, for agricultural purposes; capital stock \$20,000; main office address, 2109 Second Ave., Birmingham, Ala.

Ala., Pineapple.—Eden Development Co. (A. Dewey Smith and F. W. Dixon, 2109 2d St., Birmingham, Ala.) will develop property in Wilcox and St. Clair counties for agricultural purposes. (See Ala., Eden.)

Ark., Pine Bluff.—W. J. Doyle of St. Louis, Mo., purchased 230 acres land east of Pine Bluff for \$20,000; 165 acres under cultivation; uncultivated tract for cattle raising.

Ark., Texarkana.—John P. Kilne (Mayor), E. W. Frost and James F. Black purchased 5500 acres land and will develop for factory sites.

D. C., Washington.—Gude Bros. Company, 1214 F St. N. W., purchased 85,000 square feet of additional land at Bladensburg and Mt. Olivet roads for \$12,000; will erect rose-house, entirely of glass, to cover about 50,000 square feet.

Fla., Gulfport.—Pinellas Estates, B. F. Menzey, president, Philadelphia, Pa., has contract to construct 3000 feet of sea wall on Boca Ceiga Bay; plans to be submitted to War Department for approval. (Further facts recently noted.)

Fla., Jacksonville.—Urban Realty & Investment Co., capital stock \$100,000, incorporated; president, E. H. Paxon; vice-presidents, H. E. James and C. T. Paxon; secretary-treasurer, P. J. Saunders; no improvements contemplated at present.

Fla., Jacksonville.—Ocala Northern Land Co., capital stock \$10,000, incorporated; Geo.

L. Drew, president; J. T. G. Crawford, secretary.

Fla., Murdock.—Murdock Land Co. will construct system to drain several thousand acres of land; main canal about five miles long; purchased ditching and dredging machines.

Fla., Miami.—Robert J. Starr, president Home Investment Co., Saskatoon, Sask., Canada, now registered at Plaza Hotel, Miami, is negotiating, as representative of London capitalists, for John Henderson estate on Lake Okeechobee; comprises 95,000 acres, and report states \$1,000,000 involved; borders on lake more than 25 miles; plans division of land for agricultural development; provide additional drainage where necessary; Mr. Starr wires Manufacturers Record: "Proposition has not reached point where I can give any details."

Fla., Sarasota.—Sarasota Fruitville Co., J. H. Lord, president, will develop 1000 acres of land for sugar-cane growing; main office address Marquette Bldg., Chicago, Ill. (Recently noted incorporated with \$200,000 capital stock.)

Md., Baltimore.—Griffin Real Estate & Construction Co., capital stock \$2000, incorporated by J. Frank Griffin (205 Hoffman Bldg.), Susie I. Griffin, Charles W. Griffin and Thomas J. Griffin.

Md., Baltimore.—Frank Novak, 647 N. Kenwood Ave., will develop 35 acres on Harford Rd. for residential section on suburban plan that will be modeled from Roland Park plan; advises Manufacturers Record he will at once begin grading, constructing pavement, installing sewerage, etc. (See "Dwellings.")

Miss., Sunflower.—M. W. Mosby, Jr., Memphis, Tenn., purchased 500 acres land, having five miles of river front, for \$10,000; will probably develop.

Miss., Hazlehurst.—Southern Land & Investment Co., previously noted incorporated (under Miss. Brown's Wells), will develop 20,000 acres in Copiah county; H. J. Wilson, president; R. L. Covington, vice-president; C. O. McKinnell, secretary; G. W. Covington, treasurer; \$100,000 capital stock.

Miss., Mayersville.—Mt. Level Plantation Co., St. Louis, Mo., incorporated with \$15,000 capital stock (not \$5000, as recently stated, at St. Louis, Mo.) by H. L. Albert and others; will develop 2100 acres of land in Issaquena county; 1500 acres now under cultivation.

Mo., Joplin.—City selected Hare & Hare, landscape architects, Kansas City, Mo., to plan park and boulevard system; \$200,000 bond issue available.

Mo., St. Louis.—Albert Wenzlick will develop 64.43 acres land in Southwestern St. Louis as subdivision.

N. C., Wilmington.—Highwood Company will be incorporated by Walter Taylor, N. C. Evans, B. O. Stone, J. W. Freeman, R. E. Williams and others to develop Highwood Park (57 acres) and tract opposite, containing 60 acres.

Tenn., Chattanooga.—Kensington Farm, capital stock \$40,000, incorporated by C. E. Buck, A. W. Chambliss, G. W. Thompson, J. A. Chambliss and A. Shallday.

Tenn., Memphis.—Deer Creek Cotton Estate, capital stock \$200,000, incorporated by Roydon Dixon, Claude Seals and John B. Dickinson.

Tex., Orange.—Cameron Farm Co., capital stock \$75,000, incorporated by A. J. Bancroft, George Bancroft and G. M. Sells; acquired irrigation company formerly operated by A. J. Bancroft, who cultivated land known as Black's Bayou Plantation, 10 miles from Orange; under charter company will cultivate 4500 acres rice land.

Tex., Plainview.—Texas Land & Development Co., capital stock \$25,000, incorporated by R. S. Charles, M. D. Henderson, W. H. Mason and J. W. Grant.

Tex., San Antonio.—San Antonio, Uvalde & Gulf Land & Development Co., capital stock \$1000, incorporated by H. Roos, R. C. Roos and A. D. Yule.

Va., Churchland.—Kappa Corporation, capital stock \$50,000, chartered; purchased 35 acres land, and will develop for residential purposes; E. H. Claud, president, Portsmouth, Va.; T. E. Griffin, vice-president, and C. W. Coleman, secretary-treasurer, both of Churchland.

Va., Glenallen.—R. B. Chaffin & Co. of Richmond, Va., representing Richmond syndicate, purchased 1000 acres land, including hotel, for \$125,000; will divide property into building lots and erect dwellings.

Va., Richmond.—Kingsland Land Corporation, capital stock \$1,000,000, chartered to develop property in western section and elsewhere; John P. Branch, president; Robert G. Cabell, secretary; John Aiken Branch,

treasurer; all of Richmond; John Kerr Branch, vice-president, Quaker Hill, N. Y.

LUMBER MANUFACTURING

Fla., Jacksonville.—Jasper Cypress Co., capital stock \$25,000, incorporated; president, J. F. Doran; vice-president, A. D. McNeill; secretary, W. L. Dunbar.

Ga., Savannah.—Bright-Brooks Lumber Co., capital stock \$10,000, incorporated by A. J. Bright and W. P. Brooks.

Ga., Waycross.—J. H. Anderson, president and treasurer Anderson Lumber Co. (recently noted incorporated, capital stock \$100,000), states company is overhauling and repairing "Bally Mill;" may install additional lathing machinery later.

La., Shreveport.—Nelson-Jacks Lumber Co., capital stock \$25,000, incorporated with J. H. Jacks, president; F. W. Jacks, vice-president, both of Wichita, Kans., and F. E. Nelson, secretary-treasurer, Shreveport.

Miss., Meridian.—Meridian Mill Co., capital \$10,000, incorporated by C. E. Myers, Thomas Gray, Clyde Brooks and others.

Mo., St. Louis.—Alabama Land & Timber Co., incorporated by O. L. Brackett, C. A. Gent, A. C. Kriege and G. H. Croissant; capital stock \$50,000.

N. C., Fontana.—Montvale Lumber Co. (associate of R. E. Wood Lumber Co., 609-12 Continental Bldg., Baltimore, Md.) is proceeding with construction of plant; daily capacity, 50,000 feet lumber, with lath mill, etc.; machinery purchased and arranged for; operation probably before December. (Recently noted and previously detailed.)

N. C., Lincolnton.—Ballard & Goodson Lumber Co. purchased and will operate plant of Thompson Lumber Co.

Okla., Nowata.—Knapp Lumber Co., capital stock \$5000, incorporated by John R. Knapp, Alice R. Knapp and Thomas E. Elliott.

N. C., Newbern.—McKeel Lumber Co., capital stock \$50,000, incorporated by H. C. McKeel and J. A. Jones of Newbern, Thomas B. Hammer and Thomas P. Hammer of Philadelphia, Pa.

Tenn., Franklin County.—Davidson, Hicks & Greene Co., Nashville, Tenn., purchased 15,000 to 16,000 acres timber land in Franklin county; estimated to contain 75,000,000 feet of oak, hickory, poplar and other hardwood lumber; contemplates future development.

Tex., Waxahachie.—Waxahachie Planing Mill Co., capital stock \$5000, incorporated by Ed Plumbhoff, J. T. Couch and J. L. Gammon.

Va., Richmond.—Old Dominion Hardwood Floor Corporation, capital \$10,000, chartered; H. S. McGovern, president; Gertrude McGovern secretary; M. F. McGovern, treasurer.

Va., Roanoke.—Ide Lumber Co. increased maximum capital stock from \$25,000 to \$50,000 and minimum from \$10,000 to \$25,000.

W. Va., Jacksonville.—Hill, Lantz, Higginbotham & Co., capital \$50,000, incorporated by A. G. Higginbotham, J. C. Hill, L. E. Lantz, S. L. Martin and O. S. Martin.

METAL-WORKING PLANTS

Mo., Kansas City.—Screens.—American Screen Manufacturing Co., capital \$10,000, incorporated by Clark H. Smith, Stephen M. Bedwell and Robert L. Baker.

MINING

Ala., Sayre.—Iron.—Republic Iron & Steel Co. (general office, Frick Bldg. Annex, Pittsburgh, Pa.) will install washers at Sayre and Palos mines; estimated to cost \$45,000 to \$50,000 each, making total expenditure nearly \$100,000.

Ga., Macon.—Mica.—J. W. Gascho, Somerville, Ind., purchased at \$7000 from Porter & Harris Developing Co. latter's lease holdings on 90 acres land in Jasper county; land contains sheet mica; Porter & Harris also contemplate operations on other mineral holdings.

La., New Orleans.—Louisiana Land & Mining Co., capital stock \$3000, incorporated; John Dymond, Jr., president; A. Giffen Levy, vice-president; E. Lloyd Posey, secretary-treasurer.

Miss., Hattiesburg.—Gravel and Sand.—Hattiesburg Sand & Gravel Co. organized by D. J. Sutherland and Louis L. Davidson; will develop gravel and sand deposits.

Mo., Alba.—Lead and Zinc.—Horseshoe Mining Co. (W. R. Von Knebeck of Alba, H. L. Marks of Carthage, Mo. and others) secured 10-year lease on 14 acres mining land.

Mo., Joplin.—Lead and Zinc.—Porto Rico Mining Co., 306 First National Bank Bldg.,

Kansas City, Mo., will develop 12 acres of lead and zinc property; complete plant has been purchased; J. W. Ground, president; D. I. Parsons, vice-president; E. S. Bigelow, secretary; G. A. Baynett, treasurer. (Recently noted incorporated with \$15,000 capital stock.)

Mo., Joplin.—Budd M. Robinson will probably erect concentrating plant on mining property in Thoms Station field.

N. C., Shelby.—Graphite.—Dr. Landingham of Atlanta, Ga., and associates purchased graphite mine from David Elliott.

Okla., Perry.—Spavinaw Mineral Development Co., capital stock \$65,000, incorporated by George J. Chaplin, George A. Master, Jos. W. Appleman and others.

Va., Dillwyn.—Gold.—Andrew W. Ford purchased Horace Greeley's gold mine for \$2600.

Va., Floyd.—Copper.—William H. Harmon purchased Floyd Copper Co.'s property, consisting of 610 acres, for \$11,135.00; includes smelters, engines, boilers, mining machinery, etc.

Va., Lexington.—Limestone.—Rockbridge Lime & Stone Co. purchased 72 acres land and will develop limestone quarries; will build crushing plant.

Va., Norfolk.—Gravel.—Cape Fear Gravel Co., capital stock \$25,000, incorporated; F. J. McGuire, president-general manager; S. A. McGuire, treasurer; W. W. Terry, secretary.

Va., Roanoke.—Interior Mining Co., capital stock \$40,000, incorporated; George F. Eldridge, president, New Rochelle, N. Y.; Edward Mullan, secretary-treasurer, Westwood, N. J.

MISCELLANEOUS CONSTRUCTION

Fla., Pensacola.—City contemplates voting December 24 on \$400,000 bond issue for construction of two municipal docks. Address The Mayor.

La., Baton Rouge.—Levees.—Executive Department, Luther E. Hall, Governor, will construct Rapp levee, Plaquemine parish, left bank of Mississippi River, 16,000 cubic construct Rapp levee, Plaquemine parish, bank, 4500 cubic yards; Taylor levee, Plaquemine parish, right bank, 4500 cubic yards; Bulot levee, Plaquemine parish, right State Engineers, 213 New Orleans Court Bldg., New Orleans, La. (See "Machinery Wanted.")

La., Fort St. Philip.—Levee.—Government awarded contract to Michael Cullen of New Orleans, La., to construct 7000 linear feet wave wash revetment and to Ruddock Cypress Co. of New Orleans to furnish cypress for revetment work.

La., Mandeville.—Seawall.—City voted tax for construction of seawall. Address The Mayor.

La., Port Allen.—Levees.—Office Board of Commissioners, Atchafalaya Basin, Levee District, V. M. Lefebvre, president, will construct following work on right bank of Mississippi River, Pointe Coupee parish: Innis levee, enlargement, 29,000 cubic yards; Morganza levee, enlargement, 100,000 cubic yards; Grand to Morrison levee, 164,000 cubic yards; Fannie Ritchie levee, enlargement, 35,000 cubic yards; West Baton Rouge parish, Belle Vale levee, enlargement, 100,000 cubic yards; Iberville parish, Plaquemine City levee, enlargement, 25,000 cubic yards; Ascension parish, Germania levee, enlargement, 170,000 cubic yards; bids received until November 7 at office of Board of State Engineers, 213 New Orleans Court Bldg., New Orleans, La. (See "Machinery Wanted.")

Md., Easton.—Canal.—Talbot county will vote on \$60,000 bond issue for construction of Royal Oak canal, about three-quarters of a mile long, connecting Broad Creek and Tred Avon River with Miles River. Address County Commission.

La., New Orleans.—Levee.—State Board of Engineers, 213 New Orleans Court Bldg., awarded contract to Mrs. Selma L. Keller to construct Cornland levee in St. John parish, involving placing of about 30,000 cubic yards of embankment. (Call for bids lately noted.)

N. C., Hendersonville.—Lake.—S. E. Crittenden of Jacksonville, Fla., and associates will construct artificial lake. (See "Miscellaneous Structures.")

S. C., Charleston.—Steamship Piers.—H. H. Raymond, vice-president and general manager Clyde Steamship Co., Pier 36 North River, New York, writes to Manufacturers Record: "Contract for terminals awarded to W. P. Richardson & Co., Jacksonville, Fla.; improvements will consist of two piers, 112x425 feet and 274x425 feet, with bulkhead construction 600x75 feet; substructure of creosoted piling; pier sheds of wood frame and corrugated sheet-iron sides; bulkhead building of steel frame and corrugated sheet-iron

sides; approximate cost, \$500,000." (Previously reported planned.)

Tex., Orange.—Dredging.—Orange County Commissioners awarded contract to Ray McDonald of Austin, Tex., for dredging 26,000 yards at Mansfield Ferry in building road levee.

Tex., Port Arthur.—Dredging.—Major Thos. H. Jackson, United States Engineer, Dallas, Tex., recommended award of contract to Bowers Southern Dredging Co. of Galveston, Tex., at about \$246,000 for widening and deepening Port Arthur ship channel and dredging of additional turning basin; 3,397,000 cubic yards at 8.1 cents per cubic yard; also recommended award of contract to F. M. Picton of Galveston, Tex., at about \$153,200 for repair and extension of Sabine Pass jetties. (Call for bids lately noted.)

Tex., Port O'Connor.—Bulkhead, etc.—Government will dredge channel and build bulkhead; bids received at office of United States Engineers, Galveston, Tex., until November 12; information on application; C. S. Rich, Lieutenant-Colonel Engineers. (See "Machinery Wanted.")

Va., Scotland.—Pier Head.—Surry, Sussex & Southampton Railway Co., F. E. Waters, president and general manager, 905 Union Trust Bldg., Baltimore, Md., will rebuild pier-head on James River; recently burned.

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Equipments.—Minnesota Equipment Co., capital stock \$6000, incorporated; Jas. S. Hunter, president; Hocking Williams, vice-president; John S. Fletcher, secretary-treasurer; organized to handle sale of second-hand contractors' equipment.

Ala., Birmingham.—Laundry.—Imperial Laundry will rebuild plant at 16th St. and First Ave., burned at loss of \$5000.

N. C., Southport.—Steamboat Line.—D. K. White and associates are interested in proposition to establish steamer line between Baltimore and Wilmington, N. C., and Southport.

N. C., Southport.—Electrical Supplies, etc. Southport Manufacturing & Supply Co. organized, H. K. White, manager, to construct lines for light and power company and conduct general machine and electric supply business.

Fla., Tampa.—Publishing.—Florida Song Book Co., capital stock \$5000, incorporated; W. P. Read, president; W. F. Allen, secretary-treasurer.

Fla., Tarpon Springs.—Laundry.—J. R. Durance, C. A. Gause, C. B. Douglass and others organizing company to establish steam laundry; \$10,000 capital stock; J. H. Bacon, superintendent steam laundry of Southern College, will be in charge.

Ga., Savannah.—Ferry.—Georgia-Carolina Ferry Co. (recently noted incorporated with \$15,000 capital stock by Mills B. Lane and others) will conduct ferry between Savannah and South Carolina shore; awarded contract for construction of boats to Wilkinson Machine Works, Savannah.

La., New Orleans.—Turkish Bath.—Royal Turkish Bath Co., capital stock \$5000, incorporated; Joe Solly, president; Arthur Goldie, vice-president; Julia A. Talbert, secretary-treasurer.

Md., Baltimore.—Iron and Metal.—Boston Iron & Metal Co., 305-315 N. Holliday St., will erect office and workroom building at 744-746 W. Pratt St.; 4x75 feet; two stories; brick; cost \$5000; plans by Mr. Houck; contract let to C. M. Ellinger, 36 W. 25th St., Baltimore.

Miss., Corinth.—Laundry.—Corinth Steam Laundry Co., capital \$5000, incorporated by H. G. Collier, J. D. King and others.

Miss., Martinsville.—Livestock and Dairy.—Copiah County Livestock & Dairy Farm, capital \$20,000, incorporated by M. S. McNeill, W. L. Brown, G. S. Loeb and others.

Mo., Kansas City.—Dairy.—Kansas Milk & Produce Co., capital \$50,000, incorporated by J. Phillip Kanoky, D. A. Murphy and S. F. Harris.

Mo., Kansas City.—Crushed Rock.—Enterprise Crushed Rock Co., capital \$10,000, incorporated by Bertram W. Boxmeyer, Willard E. Webster and Ralph L. Boxmeyer.

Mo., Salisbury.—Publishing.—General Publishing Co., L. H. Miles, president, contemplates building complete printing plant; plans not developed. (Recently noted incorporated with \$25,000 capital stock.)

N. C., Wake Forest.—Machinery and Hardware.—Machinery & Hardware Co., W. R. Powell, president (recently noted incorporated with \$50,000 capital stock) will deal in machinery and hardware; erect brick building; cost \$2500 to \$3500; construction by company. (See "Machinery Wanted.")

Okl., Collinsville—Laundry.—Collinsville Laundry, capital stock \$5000, incorporated by Albert R. Hall of Collinsville, Byron H. Smith and Maude L. Smith of Bartlesville, Okla.

Okl., Muskogee—Publishing.—Press Publishing Co., capital stock \$25,000, incorporated by C. B. Douglas, H. B. Spaulding and N. A. Gibson.

Okl., Oklahoma City—Construction.—Oklahoma Construction Co., capital stock \$200,000, incorporated by E. R. Early, T. Bardon, Jr., and R. V. Mahon, all of New York.

Okl., Poteau—Engineering.—Mullergren Engineering Co., capital stock \$1000, incorporated by A. L. Mullergren, W. F. Donothan and U. F. Shofner.

S. C., Camden—Builders' Supplies.—Home Builders' Supply Co., capital stock \$5000, incorporated by F. E. Brooks, James De Loache and C. W. Burr.

Tenn., Brownsville—Laundry.—Brownsville Laundry Co., capital stock \$3000, incorporated by B. W. Ross, W. T. Bullfin, J. T. Gray and others.

Tex., Bogata—Hardware.—Bogata Hardware Co., capital stock \$12,000, incorporated by E. G. Hutchings, T. A. De Berry of Bogata and Walter H. Allan of Paris, Tex.

Tenn., Charlotte—Hardware.—Charlotte Hardware Co., capital stock \$4000, incorporated by R. Johnson, T. E. Gray, R. E. Corlew and others.

Tex., Donna—Publishing.—Donna Publishing Co., capital stock \$3000, incorporated by G. B. Merriwether, L. J. Hagstead, A. J. Whiteside and others.

Tex., Duffau, R. F. D. from Hico—Mineral Wells.—Duffau Mineral Wells Development Co., capital stock \$100,000, incorporated by T. M. Elkins, W. D. Elkins and E. H. Elkins.

Tex., El Campo—Publishing.—El Campo Citizen Publishing Co., capital stock \$7500, incorporated by F. J. Hardey, Levi Paul, W. J. Hefner, J. W. Dusen and others.

Tex., San Antonio—Paving.—Alamo Paving Co., capital stock \$25,000, incorporated by J. P. Nelson and T. W. West of San Antonio and L. R. White of Beaumont, Tex.

Tex., San Benito—Fruit and Truck Growers Sales Agency organized, with large acreage pledged; J. O. Zimmerman, president; T. J. Thornhill, vice-president; G. S. Clapp, secretary-treasurer. (See "Machinery Wanted.")

Tex., Sulphur Springs—Laundry.—Flenken Bros. of Baton Rouge, La., will build laundry; cost \$6000.

Va., Mineral—Hardware.—Mineral Hardware Co., capital stock \$25,000, incorporated by R. F. Burham, president; J. F. Sergeant, vice-president; W. P. Burch, secretary-treasurer.

Va., Norfolk—Contracting.—National Contracting Corporation, capital stock \$500,000, chartered; J. Edward Cole, president; M. M. Parker, vice-president; W. D. Southall, secretary-treasurer.

W. Va., Barboursville—Printing, etc.—Barboursville Clay Manufacturing Co., D. Blain Shaw, president, will erect three-story brick, 40x70-foot mill-construction building to be occupied mainly by Budget Printing Co.; date of opening building proposals not set.

MISCELLANEOUS PLANTS

Ala., Robertdale—Tobacco.—Gulf Tobacco Co., capital stock \$5000, incorporated by Frank M. Staples, C. K. Chamberlain, J. B. Cooper and others.

Ala., Dawes (not a postoffice)—Syrup.—Dr. G. E. Newsom, Government sugar specialist Mobile, Ala., is promoting, it is reported, establishment of two syrup factories.

Ark., Helena—Bottling.—Sinalco Bottling Co., G. S. Barnes, manager, will establish bottling works recently noted; will rent building; install machinery costing \$5000.

Ark., Little Rock—Incinerators.—McCall Incinerator Co. of Memphis, Tenn., contemplates establishing plant to manufacture garbage incinerators.

Fla., Miami—Chemicals.—Abernethy Chemical Co., capital stock \$25,000, incorporated; J. C. Abernethy, president; M. T. Abernethy, secretary-treasurer.

Fla., Pensacola—Turpentine.—Withers Turpentine Co., capital stock \$80,000, incorporated; J. H. Smithwick, president, Pensacola; J. C. Meltae, vice-president, Penton, Fla.; A. M. Withers, secretary-treasurer, Coldwater, Fla.

Ga., Savannah—Vinegar.—Wallace Vinegar Co. of Paducah, Ky., and Brocton, N. Y., will establish distributing plant; installing 12 tanks, each with average capacity of 5000 gallons, in local warehouses at 402-404 Bay St. East; vinegars, apple and grape juices handled are to be brought to local agency

direct from distilleries in full strength and are to be reduced for commercial purposes; equipment will include barreling and bottling plant; R. F. Lenehan, registered at Geiger Hotel, in charge of plant.

Ky., Louisville—Tobacco.—Cousins Tobacco Co., incorporated with \$5000 capital stock by R. G. Morton of Louisville and H. M. Cousins of Mayfield, Ky.

Ky., Louisville—Bakery.—Grocers' Baking Co., 1455 7th St., will open bids about March 1 to erect bakery; fireproof construction; cost \$27,000 to \$28,000; probable contractors, L. Keller & Son; plans by Charles Keiler; machinery contract let. (Recently noted.)

La., Crowley—Rice.—Standard Rice Milling Co. will install sprinkler system in rice mill for fire protection; cost \$8000.

La., Livonia—Sugar.—Valverde Planting & Manufacturing Co., capital stock \$150,000, organized with Charles A. Smith, president; S. P. Schwing, vice-president, and E. A. Allen, secretary-treasurer; purchased Sweet Home plantation on Bayou Lafourche for \$80,000; will dismantle sugar mill and rebuild at junction of Bayou Grosse Tete and Maringoulin.

La., New Orleans—Beverage.—Gleeson Manufacturing Co., capital stock \$250,000, incorporated; C. A. Ramsey, president; L. E. Valloft, vice-president, both of New Orleans; George Rea, second vice-president, Bay St. Louis, Miss.; O. H. Simpson, secretary-treasurer, New Orleans; B. F. Hardeeman, manager, Montgomery, Ala.

Md., Baltimore—Wearing Apparel.—Gertrude Leimbach, 1103 Emerson Tower Bldg., leased upper floors of 228-230 N. Howard St., and will equip for manufacturing woman's wearing apparel.

Md., Baltimore—Food Products, etc.—Lawrence J. McCormick (of Wells & McCormick, 1023-1024 Fidelity Bldg.), representing manufacturing interests, purchased four tracts, comprising 80 acres; three tracts are on point formed by middle branch of Patuxent River, south of Light St.; fourth tract, comprising about 20 acres, is inland in West port section; purchase price, about \$45,000; purchasers are reported as contemplating erection of plant to manufacture food products, barrel factory to have daily capacity 4000 barrels, carton factory for shipping goods manufactured, and several by product plants.

Mo., St. Louis.—Tyler estate will erect two-story factory at 1925-1929 N. 5th St.; cost \$5000.

Mo., St. Louis—Banana Carriers.—National Banana Carrier Exchange Co., incorporated by Charles Devoto, Charles H. Edgecomb, M. B. Hilliard and Geo. Bosche.

N. C., Lenoir—Mirrors.—Lexington (N. C.) Mirror Co. has arranged for site and will erect plant reported to cost within \$20,000.

N. C., Raleigh—Shirts.—Raleigh Custom Shirt Manufacturing Co. organized with William J. Andrews as president; C. R. Towles, vice-president-general manager, and C. D. Denison, secretary-treasurer; is erecting factory building on Wilmington St.; temporary location, Martin and Wilmington Sts. (Previously reported incorporated with \$50,000 capital stock.)

N. C., Weldon.—Dixon & Poole Manufacturing Co., capital stock \$50,000, incorporated by S. J. Dixon, W. D. Poole and C. S. Vinson.

N. C., Wilmington—Candy.—North State Candy Co. and E. L. Matthews Candy Co. awarded contract to D. K. Cecil of Lexington, N. C., to erect factory and store building at Front and Hanover Sts.; three stories; 6x150 feet; 13,860 square feet of floor space in manufacturing department and 13,200 square feet in wholesale department; brick, with limestone trimmings; mill construction; windows with steel sash; steam heat; electric lighting; electric freight elevator; plans by H. E. Bonitz of Wilmington; E. L. Matthews Candy Co. will manufacture candy and North State Candy Co. conduct wholesale enterprise. (Recently mentioned.)

N. C., Winston-Salem—Mattresses.—J. M. Asper Mattress Co. of Roanoke, Va., contemplates establishing mattress manufacturing and renovating plant.

Okl., Ardmore—Wallpaper, etc.—Ardmore Wallpaper, Paint & Glass Co., capital stock \$10,000, incorporated by T. N. Coleman, W. R. Burnitt and William Green.

Okl., Miami—Bed-springs.—Wilbur Bed-springs Co., capital \$40,000, incorporated by Charles S. Cook and Thomas K. Bowman of Springfield, Mo., and Bert E. Wilbur of Miami.

Okl., Sand Springs—Oil Refinery.—Regal Oil & Gas Co., 315 Madison Ave., New York, writes to Manufacturers Record: "Plans progressed far enough to announce we are arranging for immediate building, by Phoenix Refining Co. (subsidiary to this company) of refinery with daily capacity 2000 barrels; site is at Arkansas River in Sand Springs, having area of 25 acres, and located near producing properties owned by this company." (Previously announced as planned.)

S. C., Anderson—Bakery.—Anderson Steam Bakery, capital stock \$1000, incorporated by Henry Norman and Alvin Norman.

S. C., Spartanburg.—Muckenfuss Manufacturing Co., capital stock \$53,000, incorporated by W. G. Muckenfuss and S. V. Muckenfuss.

Tenn., Chattanooga—Cement-Paint.—International Cement-Paint Co., capital stock \$10,000, incorporated by W. P. D. Moross, C. A. Moross, K. Q. Kirk and others; W. P. D. Moross, president Chickamauga Cement Co. of Chattanooga, advises that International company is incorporated to take over patents pertaining to cement manufacture; no building or construction.

Tenn., Jackson—Bakery, etc.—Thompson Grocery Co., 115 E. Lafayette St., will install bakery and meat market in connection with grocery; install small refrigerating plant and fixtures for each department. (See "Machinery Wanted.")

Tenn., Knoxville—Optical.—Carter Optical Co., capital stock \$10,000, incorporated by A. F. Carter, A. Y. Burrows, S. E. Hodges and others.

Tenn., Knoxville—Hats.—S. C. Dismukes Hat Co. (recently noted incorporated with \$30,000 capital stock) reorganizes hat folding business; no manufacturing.

Tenn., Memphis—Wheels.—Kelsey Wheel Co., capital stock \$10,000, incorporated by H. R. Boyd, C. H. Trimble, L. D. Bajach, C. Falkenberg and R. W. Daniel.

Tenn., Nashville—Chemicals.—Rex Chemical Co. of Newport, Ky., will establish plant in Nashville to manufacture disinfectants, metal polish, automobile polish, etc.; equipment removed from Newport.

Tenn., Nashville—Automobile Tire Preparation.—Southern Zillo Co., capital stock \$100,000, incorporated by William Hume, Jr., Ralph Dority and A. R. Foster of Nashville, William M. Fry of Columbia, Tenn., and H. H. Reynolds of Chicago, Ill.

Tenn., Nashville—Cigars.—Central Clear Co., capital stock \$10,000, incorporated by S. A. Handley, R. A. Coleman, N. S. Adams and others.

Tenn., Nashville—Ink.—Southern Ink & Oil Co. of Savannah, Ga., will establish ink plant, making specialty of printers' ink.

Tex., Abilene—Gas.—N. W. Halsey Company of New York purchased (for \$600,000) gas, electric, water and ice properties in Abilene operated by Abilene Light & Water Co., Abilene Gas, Light, Fuel & Power Co., and Abilene Ice Co.; plans \$100,000 expenditure for improvements.

Tex., Dallas—Sporting Goods.—Cullum & Boron Company (recently noted incorporated with \$100 capital stock) will conduct wholesale and retail sporting goods business; will not manufacture explosives, as previously incorrectly reported.

Tex., Houston—Disinfectants.—Diffuse Zone Disinfecting Co., capital stock \$1000, incorporated by J. E. Stratford, W. A. Cathey and R. V. Hardway.

Texas—Soap, etc.—W. E. Hudman, Drawer 55, Waco, Tex., contemplates establishment of cotton oil refinery, compounding plant and soap factory in Texas; now organizing company. (See "Machinery Wanted.")

Tex., San Benito—Creamery.—J. A. Graham, secretary San Benito Commercial Club, advises that creamery will be built adjoining Ice & Cold Storage Co.'s plant.

Tex., Waco—Bakery.—Brazer Baking Co., capital stock \$5000, incorporated by H. A. Linke, H. F. Schaffer and W. C. Turner.

Va., Norfolk—Candy.—Red, White & Blue Candy Manufacturing Co., capital stock \$15,000, incorporated; S. Levin, president; B. Abraham, secretary.

W. Va., Cameron—Glass.—Industrial Glass Co., capital stock \$25,000, incorporated.

W. Va., Halltown—Paper Board.—Halltown Paper Board Co., capital stock \$75,000, incorporated.

MOTORS AND GARAGES

Ky., Louisville—Automobiles.—Kentucky Automobile Co. increased capital stock from \$25,000 to \$30,000; conduct retail sales agency; erect no factory.

Md., Baltimore—Garage.—J. H. Sneeringer, 2306 E. Preston St., is having plans prepared by W. Houck, Philadelphia and East Aves., Baltimore, for garage on Milton Ave. near Oliver St.; two stories; 23x70 feet; brick; fireproof.

Mo., Brookfield—Garage.—Brookfield Gar-

age Building Co., D. F. Howard, president (recently reported incorporated with \$10,000 capital stock), will open proposals in spring for 50x140-foot \$10,000 building; proposals to be addressed to Frank Dick, vice-president.

Mo., Kansas City—Garage.—Kansas City Automobile Supply Co., 1504 Grand Ave., states contemplates four-story building recently noted, but will not build for two years.

Mo., St. Louis—Trucks.—Brashear Truck Co., capital stock \$5000, incorporated by J. Roy Brashear, Boyle O. Rodas and Lewis S. Haslam.

Mo., St. Louis—Automobiles.—St. Louis Motor Transportation Co., capital stock \$25,000, incorporated by William R. Bush, Kuox Taussig, Frank J. Bush, William A. Thomas and Richard S. Locke.

Mo., St. Louis—Automobiles.—J. A. Hutchinson purchased site at 3118-3122 Locust St. and contemplates erecting building either for automobile occupancy or light manufacturing.

N. C., Asheville—Garage.—J. B. and J. E. Rumbough awarded contract to Wrenn & Garland to erect garage and machine shop; 72x100 feet; three stories and basement; reinforced concrete and steel frame; brick walls; fireproof; cost \$25,000. (Recently mentioned.)

N. C., Greensboro—Garage.—P. H. Nicholson awarded contract to J. C. Morris to erect building; one story; 88x67 feet; brick and mill construction; cost \$5000; plans by G. W. Armfield; structure leased to Corbitt Automobile Co. for garage.

Tex., Houston—Automobiles.—Motor Transfer Co., capital stock \$3000, incorporated by Mrs. Adelia McGowan, Mrs. Henrietta Dixon and John Wilson.

Tex., New Braunfels—Garage.—A. W. Pension has plans by and awarded contract to Chris Herry, New Braunfels, to erect garage; 40x70 feet; fireproof construction; electric lighting; metal corrugated roof; cost \$5000.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC

Tex., San Angelo—Gulf, Colorado & Santa Fe Railway Co., E. Merritt, chief engineer, Galveston, Tex., will erect shed to replace engine-house; later contemplates erecting permanent brick structure. (Recently reported burned.)

ROAD AND STREET WORK

Ala., Birmingham.—Jefferson County Board of Revenue awarded contract to Young & Wallace of Birmingham to grade, drain and surface with chert three miles of road from Justown toward Warrior; cost \$8000; W. S. Keller, State Highway Engineer, Montgomery, Ala. (Call for bids lately noted.)

Ala., Marion.—Perry County Commissioners receive bids until November 11 to grade, drain and surface with sand and clay four miles of Eikes Ferry Rd.; also until November 25 to grade four miles of Tuscaloosa Rd.; expenditure for each road, \$8000; George C. Seales, County Highway Engineer. (See "Machinery Wanted.")

Ark., Arkansas City.—City Council formed improvement district and will construct 1½ miles of concrete sidewalks. Address The Mayor.

Ark., Little Rock.—City will pave those portions of W. 7th, High and Battery Sts. included in Improvement District No. 212; A. N. DeMers, chairman of district, 1129 State Bank Bldg., receives bids until November 7; E. A. Kingsley, engineer, Markham and Center Sts.; Little Rock. (See "Machinery Wanted.")

Fla., Ocala.—City will construct vitrified brick paving on Fort King Ave., etc.; about 4536 square yards; bids considered December 3; H. C. Sistrunk, City Clerk. (See "Machinery Wanted.")

Fla., San Antonio.—Pasco county will construct one mile of clay and sand road; cost \$750; Allan Pearce, engineer in charge; will open bids November 12. (See "Machinery Wanted.")

Ky., Mt. Vernon.—Rockcastle county voted \$100,000 bond issue for road construction. Address County Commissioners.

Md., Baltimore.—Frank Novak, 647 N. Kenwood Ave., will grade 35 acres, construct pavements, etc. (See "Dwellings.")

Md., Baltimore.—City will grade, curb and pave with vitrified blocks, under contract No. 14, 25th St. from Huntington to Hampden Ave., about 1600 square yards; also grade, curb and pave, under contract No. 15, Second Ave. from Elm to Chestnut Ave., 25th St. from Huntington to Hampden Ave.,

27th St. from Calvert St. to Guilford Ave., Hampden Ave. from 27th to 29th St., Oak St. from 26th to 27th St., Chester St. from North Ave. to Clifton Park, and Malakoff St. from Chester to Washington st.; total, about 14,000 square yards; bids received until November 6; Eugene E. Grannan, president Commissioners for Opening Streets. (See "Machinery Wanted.")

Md., Baltimore.—State Roads Commission, O. E. Weller, chairman, 534 N. Howard St., will macadamize two sections of highway, aggregating 4.26 miles; one section in Dorchester county from Vienna to Big Mill, 1.44 miles, and one section in Worcester county from Pocomoke toward Snow Hill, 3.26 miles; bids received until November 12. (See "Machinery Wanted.")

Md., Baltimore.—City awarded contract to Standard Contracting Co., Baltimore, at \$30,215.50 for paving under contract No. 40; Bethel St. from Lancaster to Pratt St., McMechen from McCulloh St. to Park Ave., Brentwood Ave. from Biddle to Preston St. (vitrified block on 6-inch concrete base), High St. from Front St. to Fallsview (granite block on 6-inch concrete base), vitrified block, 10,300 square yards, and granite block, 900 square yards; also to Filbert Paving & Construction Co., 18 Builders' Exchange, 4 E. Lexington St., Baltimore, at \$14,778, for paving under contract No. 41; Chester St. from Lombard to Pratt St., Collington Ave. from Baltimore to Pratt St., Lombard St. from Chester to Washington St., and Madison St. from Charles to Cathedral St.; bituminous concrete, 7300 square yards; R. Keith Compton, chairman Paving Commission. (Call for bids lately noted.)

Md., Eastern.—Talbot county will construct section of State-aid highway on Miles River Rd. between Miles River and Unionville, 1.06 miles; County Commissioners receive bids until November 12; Joseph B. Harrington, Clerk. (See "Machinery Wanted.")

Md., Frostburg.—City will grade and pave 600 feet of 1st Al. and 200 feet of Lucas or Fressman Al.; street committee (John J. Price and others) receives bids until November 4. (See "Machinery Wanted.")

Miss., Poplarville.—Pearl River county will not vote on bond issue for road construction. (Recent report incorrect.)

Mo., Joplin.—City selected Hare & Hare, landscape architects, Kansas City, Mo., to plan boulevard and park system; \$300,000 bond issue available.

N. C., Charlotte.—City awarded contract to J. W. Haas of Charlotte to lay cement sidewalks on North Tryon St.; 1040 square yards concrete sidewalks and 1200 cubic yards grading; also awarded contract to W. S. Stancill for removal of 56 trees. (Call for bids lately noted.)

N. C., Gastonia.—City votes November 30 on \$32,000 bond issue for street improvements, \$12,500 for sewer construction, \$10,000 for water-works, \$2500 for lights and \$10,000 for schools. Address The Mayor.

N. C., Newbern.—Board of Aldermen rejected bids for placing 4600 feet granite curbing, 5x14 inches; O. A. Kafer, purchasing agent. (Call for bids lately noted.)

N. C., Salisbury.—Public Service Co. awarded contract to I. G. Lawrence, High Point, N. C., to pave between its tracks on Main St.; about 9000 square yards seven-inch concrete and two feet on each side; amount available, \$15,000.

N. C., Statesville.—J. T. Platt, Greensboro, N. C. (present address, Statesville), has received contract for about 12 miles grading on Coal Springs Rd.

S. C., Gaffney.—City awarded contract to P. S. Minus, Spartanburg, S. C., to construct recently-noted sidewalks and curbing; price about \$6000.

Tenn., Memphis.—Shelby County Commissioners will pave with asphaltum Central Ave. from Parkway east to Goodwyn Ave. and Goodwyn Ave. south to Southern Railway, about two miles; receive bids until November 4. (See "Machinery Wanted.")

Tex., Dallas.—City Commissioners awarded contract to Texas Bitulithic Co. of Dallas at \$17,900 to pave Colonial Ave.

Tex., Orange.—Orange County Commissioners will instruct County Engineer to prepare specifications, after which bids will be invited for both shelling and graveling about 50 miles of road.

Tex., Galveston.—City Commission awarded contract to P. J. Vautrin of Galveston at \$3,754.78 to pave two blocks of Broadway; 2333 square yards concrete pavement and 784 linear feet concrete coping.

Ten., Lafayette.—New Harmony Turnpike Co., capital stock \$500, incorporated by L. B. Stubblefield, Caleb White, W. B. Carter, W. B. Allen and W. A. Fuqua.

Tex., Orange.—Orange County Commissioners awarded contract to Ray McDonald of Austin, Tex., at \$21,776.50 to construct 53 miles of road. (Call for bids lately noted.)

Tex., Richmond.—Fort Bend County Commissioners awarded contract to John C. Underwood of Houston, Tex., to construct 2½ miles of gravel road on Richmond-Foster public road and about 2¼ miles of gravel road on Rosenberg-Foster public road; Clifton Rice, engineer; cost \$30,000. (Call for bids lately noted.)

Va., Coeburn.—Town will construct sidewalk from Clinchfield Mill to Guest River bridge; length 5150 feet; width 18 inches; town will build walk from mill to corporation line, 550 feet; remaining 4000 feet will be constructed at expense of property owners along route. Address Town Clerk.

Va., Lawrenceville.—Brunswick county will construct 83.4 miles of gravel or soil roads in Totaro and Powellton districts; bids received at County Clerk's office until November 12; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

W. Va., Edgewood, P. O. at Wheeling.—Town voted on bond issue for street improvements. Address Town Clerk.

SEWER CONSTRUCTION

Fla., Live Oak.—City will construct sanitary sewer system for which bond issue was previously noted; work consists of about 9½ miles of pipe sewers from 8 inches to 15 inches in diameter, with sewage-disposal plant; bids received until November 21; H. S. Jaudon Engineering Co., engineer, Box 582, Savannah, Ga.; W. H. Lyle, chairman. (See "Machinery Wanted.")

Fla., Miami.—Edgewater Company will lay sewers in Edgewater, suburb of Miami; bids received; Crabtree & Zoll, engineers in charge.

Fla., Mulberry.—City, E. H. Dudley, acting Mayor, voted recently-noted \$30,000 bond issue for installation of sewer system and disposal tank; J. B. McCrary Company, Atlanta, Ga., engineer.

Fla., Orlando.—City voted \$140,000 bond issue to construct septic tank sewer system; 29-mile pipe line; W. H. Reynolds, Mayor. (Recently mentioned.)

Fla., West Palm Beach.—City will construct 22,000 feet concrete sewer pipe with manholes and septic tank recently noted; bids opened December 3 (extended date); A. M. Lopez, City Clerk. (See "Machinery Wanted.")

Ga., Camilla.—City voted \$2500 bond issue to improve sewer system. Address The Mayor. (Recently mentioned.)

Md., Baltimore.—City will construct sanitary lateral sewers in District No. 40-A; 26,000 linear feet vitrified-pipe sewer, 8 to 15-inch diameter, and 13,000 linear feet vitrified-pipe house connections; bids received until November 6; Charles England, chairman Sewerage Commission. (See "Machinery Wanted.")

Md., Baltimore.—Frank Novak, 647 N. Kenwood Ave., will construct sewers in connection with developing 35 acres for residential section. (See "Dwellings.")

Md., Baltimore.—City awarded contract to William McCarthy & Co., 121 Pearl St., Baltimore, to construct storm-water drains, contract No. 23; 1370 linear feet 15 to 24-inch drain, 770 linear feet 12 and 15-inch inlet connections, 15 manholes and 23 inlets; Calvin W. Hendrick, chief engineer Sewerage Commission, 904 American Bldg. (Call for bids lately noted.)

Md., Mt. Washington.—Baltimore County Commissioners, Towson, Md., will purchase plant of Baltimore Suburban Sewerage Co. at Mt. Washington for \$600,000; plan to enlarge plant to capacity for drainage of territory adjacent to Baltimore city, including Towson, Lutherville, Ruxton, Sherwood, Pikesville, Mt. Washington, etc.

N. C., Gastonia.—City votes November 30 on \$12,500 bond issue for sewer construction. Address The Mayor. (See "Road and Street Work.")

Okla., McAlester.—City will expend \$12,000 to construct 8 and 10-inch sewer pipe; J. P. Halladay, engineer in charge; contract recently noted awarded to F. S. Smedley of McAlester. (See "Machinery Wanted.")

Tex., Canadian.—City voted bond issue to construct sewer system. Address The Mayor. (Recently mentioned.)

Tex., Clarksville.—City awarded contract to Dalton & Campbell of Dallas, Tex., at \$17,875 to construct sewer system and sewage-disposal plant; Hugh & Peterson, consulting engineers, Muskogee, Okla.; J. R. Webb, City Clerk.

Tex., Houston.—City will construct sanitary sewers in First and Sixth wards; 28,760 linear feet 8-inch sewer pipe, 3205 linear feet 10-inch pipe, 1050 linear feet 12-inch pipe, manholes, etc.; pipe to be all vitrified pipe or Thomas cement glazed sewer pipe; Dan C. Smith, City Comptroller, receives bids until November 25; recently mentioned; H. B. Rice, Mayor. (See "Machinery Wanted.")

Tex., Houston.—City will construct sanitary sewers in Fifth ward; 22,720 linear feet 8-inch sewer, 2500 linear feet 10-inch sewer, 3000 linear feet 12-inch sewer and 8500 linear feet 24-inch sewer; pipe to be all vitrified pipe, Meriwether lock-joint reinforced concrete pipe for 24-inch size only, or Thomas cement glazed sewer pipe; Dan C. Smith, City Comptroller and secretary, City Hall, receives bids until November 25; H. B. Rice, Mayor. (See "Machinery Wanted.")

Tex., San Benito.—City will construct sanitary sewers; 17,450 linear feet 8-inch pipe, 10,250 linear feet 10-inch pipe, 3375 linear feet 12-inch pipe, 2275 linear feet 15-inch pipe, 1450 linear feet 18-inch pipe, 106 manholes and 2 disposal plants; Brice Frazier, City Clerk, receives bids until November 13; bids opened November 18; city recently noted as having rejected bids; Bruce Gentry, City Engineer. (See "Machinery Wanted.")

Va., Staunton.—E. W. Ritchie, consulting engineer, Staunton, is preparing preliminary plans for construction of complete system of sanitary and storm sewers.

TELEPHONE SYSTEMS

Fla., Macclenny.—Baker County Telephone Co., capital stock \$2000, incorporated; T. P. Taylor, president; H. Bauman, secretary.

Tex., Clarksville.—Clarksville Telephone Co. (recently noted) organized with \$25,000 capital stock; succeeds Home Telephone Co.; plans not decided.

Va., Hillsville.—I. W. Surratt, president Reed Island Mutual Telephone Co., Sylva, Va., states contract recently noted for purchasing system of Hillsville Telephone Co. has not been consummated pending adjustment of certain technicalities, etc.

TEXTILE MILLS

Ala., Jacksonville.—Cotton Yarns.—William P. Hazlewood, Boston, Mass., and Atlanta, Ga., decided to take out looms and install 5000 spindles in Verlina Mills, heretofore reported purchased.

Ga., Hartwell.—Sheeting.—Hartwell Mills writes to Manufacturers Record: "We have in contemplation doubling our mill, but this will be some time in future; probably a year, at least." (Recently mentioned as reported to double equipment of 8000 spindles and 200 broad looms.)

N. C., Dunn.—Silk Hosiery, etc.—Dunn Silk Mill Co., capital stock \$25,000, incorporated by Samuel Draughton, T. Draughton and C. G. Smith of Dunn; A. E. McNeill and J. W. Johnson of Lillington, N. C.; to manufacture silk hosiery, shirts, etc.

N. C., Lexington.—Cotton Cloth.—Dacotah Cotton Mills expects to add 4800 spindles and 200 looms next spring.

WATER-POWER DEVELOPMENTS

Ga., Carrollton.—Atlanta-Carrollton Railway, Light & Power Co. has option on Belle Shoals water-power, on Dog River, with view of constructing hydro-electric plant.

Ky., Paris.—B. T. Mattox will construct dam at mill; reinforced concrete; 230 feet long; 10-foot abutment at each end; 8 feet high; 6 feet thick at base and 4 feet at top; anchored to bedrock of Stoner Creek with 60 steel rods imbedded in rock.

Ky., Somerset.—L. F. Hubble has, it is reported, sold Sublimity Springs water-power to capitalists, who will construct hydro-electric plant.

Okla., Muskogee.—Muskogee Water Power Co., S. P. Mann, president, 507 Surety Bldg., writes to Manufacturers Record: "Active construction delayed on account of fact will have to get permit from War Department or act of Congress to divert water at head of navigable stream—Arkansas River; amount of horse-power to be developed, 20,000 to 25,000 commercial horse-power; cost of dam and power-house, \$900,000 to \$1,000,000; location of plant, Grand River at Muskogee; engineer in charge, W. H. Rosecrans Engineering Co., Stock Exchange Bldg., Chicago, Ill." (Previously outlined.)

W. Va., Kingwood.—West Penn Traction & Water Power Co. (W. S. and J. S. Kuhn), Bank for Savings Bldg., Pittsburgh, Pa., progressing with hydro-electric development on Cheat River in West Virginia, near Cheat Haven, Pa.; F. W. Scheidlenhelm, 308 First National Bank Bldg., Pittsburgh, chief en-

gineer of American Water Works & Guarantee Co. (J. S. Kuhn, president), writes to Manufacturers Record: "Contract for construction of dam and substructure of powerhouse let July 22 to T. A. Gillespie Company, Pittsburgh; operations to date involve excavation for east abutment of dam and foundations of transformer-house and portion of powerhouse; cofferdam built in river encloses sites for powerhouse, forebay and part of tailrace; cofferdam completed and active excavation within same to be undertaken at once; dam of massive concrete construction of gravity type, about 890 feet long; for about 500 feet of length height from foundations to top of spillway crest will measure about 80 feet and to floor of bridge over gates to surmount dam about 100 feet; spillway section of dam about 650 feet long and western end joins powerhouse and forebay structure; length of powerhouse approximately 140 feet; provision made for installation of four 12,000-horse-power units of vertical type for operating under 82-foot head; contract for turbines recently let to Wellman-Seaver-Morgan Company, Cleveland, O.; George F. Rowell, engineer in charge construction at Cheat Haven; design for power plant machinery entrusted to W. E. Moore of West Penn corporation." Mr. Scheidlenhelm also writes to Manufacturers Record: "West Virginia Power & Transmission Co. is to take care of distribution of electric power in West Virginia markets, obtaining its hydro-electric power from the water-power developments on Cheat River." This company was recently reported incorporated with \$50,000 capital stock by Mr. Scheidlenhelm and associates. (Previously mentioned.)

WATER-WORKS

Ala., Gadsden.—Bellevue Highlands Co. will build 100,000-gallon standpipe to furnish water to Bellevue, suburb on Lookout Mountain; reservoir will be part of complete water-works system which company will install as property is developed.

Fla., Mulberry.—City, E. H. Dudley, acting Mayor, voted \$5000 issue for water-works; engineer, J. B. McCrary Company, Atlanta, Ga. (Bond issue and purchase of water-works recently noted.)

Ga., Byromville.—City engaged J. B. McCrary Company, Atlanta, Ga., as engineer for water-works construction recently noted; \$6000 to be expended; 60,000-gallon tank; date of opening bids not set; A. D. Maxwell, City Clerk.

Ga., Camilla.—City voted \$10,000 bond issue to improve water-works and electric-light plant. Address The Mayor. (Recently mentioned.)

Ga., Newnan.—City granted franchise to Newnan Cotton Mills to lay water mains under various streets.

Ky., Lexington.—Lexington Hydraulic & Manufacturing Co. purchased two tracts of land, one of 122½ acres and other of 90 acres, to be used to increase present watershed; total purchase price, \$28,000.

La., Donaldsonville.—Municipal Light & Water Commission has contracted for Diesel engines and other machinery recently noted to be installed; will erect 45x50-foot brick building with steel trussed metal roof; construction and installation to be directed and supervised by chief engineer, E. A. Thibodeaux.

Md., Rising Sun.—City Commissioners granted franchise to Hugh T. Downing to construct water-works and electric-light plant.

Md., Lancaster.—City awarded contract to J. A. Moynahan of Richmond, Ky., to build addition to concrete dam, and to Greer Filter Co. of Pittsburgh, Pa., to build concrete filter basin.

Miss., Brookville.—City will install 60-horse-power oil engine, better air compressor, 7x10 duplex ring and plunger pump to be direct connected to engine by friction clutch; Mayor and Board of Aldermen receive bids until November 5; Thomas S. Gay, Town Clerk. (Previously mentioned.)

N. C., Gastonia.—City votes November 30 on \$10,000 bond issue for water-works. Address The Mayor. (See "Road and Street Work.")

Tenn., Arlington.—City voted \$10,000 bond issue for construction of water-works. Address The Mayor.

Tex., Abilene.—N. W. Halsey Company of New York purchased (for \$600,000) water, ice, gas and electric properties in Abilene operated by Abilene Light & Water Co., Abilene Gas, Light, Fuel & Power Co. and Abilene Ice Co.; plans \$100,000 expenditure for improvements.

Tex., Brady.—City votes November 16 on issuance of \$12,250 of bonds for purchase of

Brady Water & Light Co.'s water and light plant. Address The Mayor. (Recently mentioned.)

Tex., Canadian.—City voted bond issue to construct water-works. Address The Mayor. (Recently mentioned.)

Tex., Elgin.—Mayor Roemer is promoting organization of company to drill artesian well.

Tex., Fort Worth.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, Galveston, Tex., will install new water system, including water tower and ground pipe, in local yards; appropriation \$1740.

Tex., Longview.—City voted \$100,000 bond issue for enlargement and extension of water-works. Address The Mayor.

Tex., Marfa.—City contemplates issuing bonds to complete water-works. Address The Mayor.

W. Va., Broad Oaks (not a postoffice).—Village has plans by Dudley D. Brett of Clarksburg, W. Va., for water-works estimated to cost \$20,000.

WOODWORKING PLANTS

Ala., Gadsden.—Cooperage.—Kyle Cooperage Co., capital stock \$13,500, organized with T. S. Kyle, president; E. B. Kyle, vice-president; and Otis Qragg, secretary; secured planing mill at mouth of Town Creek on Coosa River, formerly owned by Kyle Lumber Co.; machinery purchased; require 25 cords of wood daily; daily output, 6000 keg heads and 2500 barrel heads.

Ark., Malvern.—Sashes, Doors, etc.—Memphis Sash & Door Co., Memphis, Tenn., states contemplates no improvements nor installation of new machinery in plant (recently noted) purchased from Rockwell Screen Door Co.

Ark., Newport.—Veneer, etc.—Oscar E. Jacobs, Kalamazoo, Mich., and associates plan utilizing plant of American Panel & Lumber Co.; recently mentioned; to manufacture veneer, etc.; contemplate pulp manufacture in future.

Ark., Helena.—Cooperage.—H. S. Miller will build cooperage.

Ark., Texarkana.—Hubs.—Hub Manufacturing Co., F. J. Bosler, Jonesboro, Ark., will establish hub factory to cost \$15,000; utilize ash and hickory on 16,000 acres purchased by Mr. Bosler.

Fla., Miami.—Wagons.—Charles Sherritt will build two-story wagon works and warehouse; plans prepared.

Md., Baltimore.—Building Supplies.—Jones Woodwork Co., capital stock \$10,000, incorporated by William E. Goldsmith (327 Law Bldg.), John H. Jones and Emanuel E. Ottenheimer.

Mo., St. Louis.—Wagons.—Frederick M. Roehlk will build two-story shop at 318-320 S. 15th St.; cost \$3000.

N. C., Lenoir.—Tables, Excelsior, etc.—Blue Ridge Bending Co. will make improvements; is erecting 25x40-foot building and will install machinery for making tables, excelsior and washboards.

Tenn., Jackson.—Veneer.—Jackson Lumber Co. (recently noted) will rebuild frame warehouse only; no machinery needed.

Tenn., Memphis.—Cooperage.—Chickasaw Cooperage Co., North Front and Sycamore Sts., states previously-noted plant at Binghamton will probably be in operation by December 1; cost about \$45,000; annual output about 20,000,000 staves and 1,000,000 sets heading, 400,000 barrels; main factory 100x230; storage sheds 50x220 and 75x230; four 17x120 drykilns, of hollow tile and concrete; all fireproof construction.

Tex., Paris.—Crates, etc.—Cummer Manufacturing Co. reorganized and increased capital stock from \$40,000 to \$80,000. J. K. Warren is president; has building and machinery.

Tex., Sherman.—Doors, Sashes, etc.—Campbell & Landrum will erect building, 32x54 feet, to be equipped for manufacturing doors, sashes, etc.

Tex., Texarkana.—Cooperage.—Gulf Cooperage Co., George H. Taber, president, Pittsburgh, Pa., will rebuild four-still drykiln; 100x120 feet; fireproof construction; building proposals may be addressed to C. F. Marsh of Gulf Producing Agency, Pittsburgh, Pa.; no machinery needed; daily capacity, 1200 to 1500 white oak boards. (Recently noted burned.)

Tex., Wharton.—Barrel Staves and Handles. J. Wernet of Dallas, Tex., contemplates establishing barrel stave and handle factory.

Va., Altavista.—Furniture.—H. L. Lane and T. V. Elsom of Altavista, R. G. Evans of Lynchburg, Va., and J. D. Johnson and W. J. Quick of Roanoke, Va., acquired Altavista

Consolidated Furniture Works, and will operate under title of Evans Furniture Manufacturing Co. until present supply of material is manufactured.

W. Va., Nicolette.—Boxes.—Biltmore Box Co. of Biltmore, N. C., contemplates establishing box factory.

BURNED

Ala., Birmingham.—Imperial Laundry at 16th St. and First Ave.; loss \$5000.

Ala., Birmingham.—Warehouse of G. W. Hopson & Sons, Ave. A and 16th St.; loss \$80,000.

Ala., Pine Hill.—Pine Hill Hotel; Lee Hotel; loss \$10,000.

Ala., Hartford.—P. M. Metcalf's residence.

Ark., Hamburg.—Holland Bros.' sawmill.

Fla., De Land.—Isaac A. Stewart's packing plant; estimated loss \$4000.

Ga., Buford.—A. M. Light's livery barn, loss \$4000; W. E. Sears' livery stable, loss \$1500; W. J. and Harvey Pearce's grist mill, loss \$2000; J. Loss Shadburn's storehouse, occupied by Amuse You Picture Theater, loss \$5000; Minor C. Shadburn's general store, loss \$6000.

Ky., Donerall.—Store of Al. Hawkins; loss \$4000.

Ky., Louisville.—Louisville Clothing Co.'s building at 713 W. Market St.; loss about \$25,000.

Ky., Louisville.—Dwelling of Marshal George Wilson, 134 Ashland Ave., Highland Park; loss \$3200.

Ky., Shelbyana.—Postoffice; Chesapeake & Ohio Railway's depot (F. I. Cabell, chief engineer, Richmond, Va.); W. F. Morell's store; total loss \$40,000.

Ky., Wickliffe.—Residence of W. M. Sullivan, town marshal; loss \$6000.

La., Alsatia.—Aaron Joseph's store; loss about \$10,000.

La., Lake Charles.—Harrop Company's building; loss \$25,000.

La., Kinder.—Peavy-Byrnes Lumber Co.'s general offices and commissary; estimated loss, \$10,000.

Md., Catonsville.—Residence of Mrs. John G. Hollyday on Edmondson Ave. ext.; loss, including furniture, \$12,000.

Md., Cumberland.—Freedom Oil Works Co.'s plant.

Md., East New Market.—John Holzwarth's residence; loss \$3500.

Miss., Meridian.—Rev. Dr. A. Venable's residence on Marion Rd.

Miss., Schlater.—Ethridge & Jones' cotton gin; estimated loss, 14,000.

Mo., Eldorado Springs.—Cruce Block, buildings owned by S. M. Snodgrass, G. W. Smith, Lyric Theater, C. C. Whipple, I. Stemmel and C. L. Adams; total loss about \$60,000.

Mo., Kansas City.—Standard Warehouse Co.'s warehouse, owned by Carlyle Commission Co., office in Livestock Exchange, loss \$25,000; Badger Lumber Co.'s branch yard, loss \$15,000.

Mo., Springfield.—Plant of Fruit Dispatch Co., New Orleans, La.; loss \$40,000. E. D. Levy, A. G. M. St. Louis & San Francisco Co., may be addressed.

N. C., Denim.—Three residences on 17th St., owned by White Oak Mill Co., Greensboro, N. C.

N. C., Pleasant Garden.—Dr. Tyson's dwelling.

Okla., Geary.—L. M. Hartley's store; J. L. Gable's store; total loss \$15,000.

Okla., Wagoner.—Wagoner Ice & Cold Storage Co.'s plant.

Tenn., Knoxville.—Church of the Holy Ghost, at Central St. and Pearl Pl., damaged; Rev. Father O'Connor, pastor.

Tenn., Nashville.—Graves & Gilliland's sawmill; estimated loss \$7000.

Tex., Abilene.—Residence on North 6th St., owned by Dr. J. F. Alexander; loss \$3500.

Tex., Crockett.—American Gin Co.'s cotton gin; W. O. Lockey's cotton gin.

Tex., Ferris.—Ferris Pressed Brick Co.'s plant; loss \$20,000.

Tex., Greenwood.—Murphree & Burkham's cotton gin; loss \$4000.

Tex., Hillsboro.—Dr. W. R. Dazey's dwelling; loss \$4500.

Tex., Longview.—Roundhouse and shops of Texas & Gulf Railway and Port Bolivar Iron Ore Railroad; estimated loss \$20,000; J. H. Keefe of Galveston, Tex., is president of Texas & Gulf Railway.

Tex., Montague.—Parr Bros.' cotton gin; loss \$4500.

Tex., Sherman.—Residence of William A. Lyon, 700 N. Branch St.; loss \$3000.

Tex., Tatum.—W. A. Allen's cotton gin; loss \$2500.

Tex., Timpson.—W. J. Walker's residence.

Va., Hot Springs.—B. T. Northern's residence "Valley View;" loss about \$20,000.

Va., Sutherland.—J. W. Probst & Bro.'s flour and corn mill; estimated loss, \$2000.

W. Va., Bowden.—Simon Deal's sawmill; loss \$3000.

erect tenement at 4037 Florissant St.; two stories; cost \$3000.

N. C., Asheville.—G. F. Stradley will erect store and apartment building. (See "Stores.")

Tenn., Memphis.—Charles Keeler has plans by John Gaisford, Memphis, for apartment-house at Madison Ave. and Claybrook St.; three stories; 12 apartments; brick and stone; cost \$30,000.

Tex., Dallas.—E. Wilks, contractor, will erect apartment at 1812 St. Louis St.; 10 rooms; cost \$7000.

Tex., Galveston.—Dr. F. B. King will erect apartments on La Branch St.; cost \$15,000.

Tex., Houston.—John Sherman will expend \$16,000 to erect apartment-house; 55x90 feet; brick; tar and shell roof; eight apartments; two stories; pressed-brick front and one side; plans by Jones & Tabor, 506 Hinz Bldg., Houston; bids opened October 24. (Recently noted.)

Va., Richmond.—W. F. Drinkard, Jr., will erect apartment on Hanover Ave. near Vine St.; two stories; brick; cost \$8000.

ASSOCIATION AND FRATERNAL

N. C., Asheville.—Ancient Free and Accepted Masons will erect lodge and store building at Woodfin and Main Sts.; four stories; fireproof; first floor for stores, other floors for lodge purposes; steam heat; electric lights; passenger elevators, etc.; cost \$50,000. (Lately noted.)

N. C., Asheville.—Asheville Aerie, Fraternal Order of Eagles, E. M. Mitchell, president, is having plans prepared by R. S. Smith for lodge and store building on N. Main St.; three stories; first floor for stores, other two stories for lodge purposes; baths, electric lights, etc.; cost about \$16,000. (Lately noted.)

Tex., Humble.—Woodmen of the World will have plans and specifications prepared by Dunderdale & Eastburn for lodge, store and office building; concrete construction.

Tex., Tabor.—Woodmen of the World will erect lodge building; E. K. Thompson, secretary of Business Men's League, is chairman of committee.

Va., Richmond.—Acacia Temple, Nobles of the Mystic Shrine of Virginia, plans to erect mosque to cost about \$100,000; E. A. Evans, Preston Belvin, M. J. Fulton and others, committee.

BANK AND OFFICE

Ark., Amity.—Farmers and Merchants' Bank will erect bank building; 25x60 feet; ordinary construction; brick; cost \$3000; architect not selected.

Ark., Hot Springs.—M. A. Sheets of Terre Haute, Ind., is reported as to erect bank, office and hotel building at Central and Ouachita Aves. and Market St.; 10 stories.

Ark., Little Rock.—Commonwealth Trust Co. contemplates erecting bank building. (See "Machinery Wanted.")

Fla., Bartow.—T. A. Goode will erect building.

Ga., Rome.—C. Terehune and associates are promoting organization of company to erect bank, store and hotel building. (See "Hotels.")

Ky., Louisville.—National Theater Co. will expend \$250,000 to erect office and theater building recently noted. (See "Theaters.")

Md., Elkton.—Elkton Banking & Trust Co. has plans by A. C. Leach, 223 N. Charles St., Baltimore, for bank building; 24x60 feet. (Recently noted.)

Mo., Joplin.—Newman Mercantile Co. will remodel burned building at 8th and Main Sts. and erect additional structure for offices and store; two stories; brick; lower floors for stores; upper floors for offices.

Mo., St. Louis.—W. T. Kemper, president of Commerce Trust Building, will erect building on 3d St.

Mo., St. Louis.—G. H. Boehmer and associates will erect store, office and apartment building. (See "Apartment-houses.")

N. C., Winston-Salem.—Standard Oil Co., main office, 26 Broadway, New York, will, it is reported, erect office and warehouse. (See "Warehouses.")

Tex., Denison.—National Bank of Denison, R. S. Legate, president, will expend \$5000 to remodel bank building; 50x120 feet; mill construction; hot-water heat; plans by R. T. Forsythe of Denison; contract for vault doors, marble and mahogany and fixtures let to W. D. Collins of Denison. (Recently noted to receive bids until October 24 to remodel building.)

Tex., Houston.—Levy Bros. are having plans prepared by C. D. Hill & Co., Houston, to erect office building at Main and Capitol

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Fla., Jacksonville.—Central Investment Co. will erect building for store and apartments or hotel. (See "Stores.")

Ga., Savannah.—Mrs. Clara L. Davis will erect apartment-house at 517-19-21 Waldburg St.; two stories; four apartments.

La., New Orleans.—Jules S. Dreyfous, 341 Carondelet St., is having plans prepared for apartment at Washington St. and St. Charles Ave.; 41x190 feet; three or four stories; brick; seven or nine-room apartments; sun parlor; observatory; hardwood floors; vacuum cleaning system; vestibule effect in center of building with glass dome; each apartment to contain stoves and ice chests; contract will be awarded in about 30 days; will also remove frame building on site of new building 50 feet and remodel and convert into duplex apartment-house.

Md., Easton.—W. T. Hubbard will extend residence on Harrison St. and remodel for apartments.

Mo., Kansas City.—W. Y. Gregg will erect apartment-house and store at 3942 Troost St.; brick; cost \$15,000.

Mo., Kansas City.—H. S. McDonald will erect apartment and store at 3125 Independence St.; brick; cost \$10,000.

Mo., St. Louis.—Charles W. Gorges will erect apartment and store buildings on Olive St. west of Taylor Et., to cover site 280 feet long.

Mo., St. Louis.—Jul Glass will erect two-story tenement-house at 2008 Adelaide St.; cost \$5000.

Mo., St. Louis.—J. C. Benstek will erect two-story tenement-house at 2111 N. 10th St.; cost \$3000.

Mo., St. Louis.—G. H. Boehmer and associates will erect bachelor apartment, office and store building at Taylor and Olive Sts.; seven stories.

Mo., St. Louis.—V. A. Chinberk will erect two two-story tenement-houses at 5301-07 N. Broadway; cost \$10,000.

Mo., St. Louis.—Landay Real Estate & Investment Co. is having plans prepared by Clymer & Drischler, St. Louis, for bachelor apartment building on Olive St. near Taylor Ave.; six stories; 170x180 feet; about 200 rooms; swimming pool, gymnasium, etc.; white enameled terra-cotta front; red brick rear; cost \$200,000.

Mo., St. Louis.—Louisa Reifenstein will erect apartment-house at 3400-02 Winnebago St.; two stories; cost \$6700.

Mo., St. Louis.—William Kahmann will erect apartment-house at 2350 Holly St.; two stories; cost \$5500.

Mo., St. Louis.—C. F. Kemper will erect apartment-house at 3621 Nebraska Ave.; two stories; cost \$3500.

Mo., St. Louis.—Joseph Brown will erect apartment at 4322 Hartford St.; two stories; cost \$6000.

Mo., St. Louis.—Jessie Young will erect three apartment-houses at 1467-82 Shawmut St.; two stories; cost \$9000.

Mo., St. Louis.—J. P. Wilhelm will erect two-story tenement at 3452 Spring St.; cost \$3000.

Mo., St. Louis.—C. Jammzo will erect two two-story tenements at 2503-09 Hodiament St.; cost \$10,000.

Mo., St. Louis.—Fred Wiese will erect three two-story tenements at 2335-37-43 Osage St.; cost \$5600.

Mo., St. Louis.—William Rueweller will

Sts.; eight stories; structural steel; engine-room, etc. (Recently noted.)

Tex., Humble.—Woodmen of the World will erect lodgerooms; containing offices and stores. (See "Association and Fraternal.")

Tex., Lancaster.—White & Co. have plans by Lang & Wittich, Dallas, Tex., for bank and store building; 92x92 feet; ordinary construction; gravel roof; cost \$20,000. (Recently noted.)

Tex., Longview.—J. C. Lacy purchased materials to erect bank and office building; 25x65 feet; two stories; ordinary brick construction.

Tex., Lubbock.—Bids opened October 26 by Lubbock State Bank for demolishing walls of present bank and reconstructing same with brick, stone and marble; building 50x100 feet; two stories; certified check for \$100; plans on file at office of Henry Mount, architect.

Tex., Mount Sulman.—Guaranty State Bank, C. T. Burton, president, will erect bank.

Tex., San Antonio.—Estate of Dr. Ferd Herff will erect office and store. (See "Stores.")

Tex., Santa Maria.—Santa Maria Bank, N. W. Astin, president, will, it is reported, erect brick bank building.

CHURCHES

Ala., Bessemer.—Baptist church plans to erect Sunday-school room. Address The Pastor, Baptist Church.

Ark., Helena.—First Baptist Church will erect church building to cost \$25,000. Address The Pastor, First Baptist Church.

Fla., West Palm Beach.—St. Ann's Roman Catholic Church will open bids through architect, John Charles Norton, 297 Mahan Bldg., Ardmore, Pa., to erect edifice; 40x30 feet; fireproof construction; indirect illumination; red Spanish tile roof; cost \$25,000.

Ky., Carlisle.—Rev. R. M. Reynolds, Mt. Sterling, Ky., is interested in erection of union tabernacle at White Chimneys.

Md., Baltimore.—St. Jerome's Catholic Church, Rev. James P. Holden, pastor, 761 W. Hamburg St., will erect edifice at Hamburg and Scott Sts.; Romanesque design, with towers; cost \$80,000.

Mo., St. Louis.—St. Timothy Mission will erect edifice at 2349 N. Euclid St.; two stories; cost \$5,000. Address The Pastor, St. Timothy Mission.

Mo., St. Louis.—Grand Avenue Presbyterian Church approved plans by Albert B. Groves, 314 N. 4th St., St. Louis, to erect edifice at Delmar Blvd. and Union Ave.; will proceed with erection of chapel, which is to be first part of completed church; English Gothic style; 135x220 feet; auditorium, etc. (Recently noted.)

Tenn., Chattanooga.—Centenary Methodist Episcopal Church has plans by R. H. Hunt, Chattanooga, with Barnwell & Jones, assistant supervising architects, Chattanooga, for edifice; will soon advertise for bids to be received by Mr. Hunt; site 200x150 feet; main church building, including gallery, to seat 1500; bowl-shaped floor; paneled wainscoting of wood around entire auditorium; rostrum, altar and choir also finished in paneled woodwork; ornamental plaster arch over choir and pipe organ; ornamental paneled ceiling; moldings; ornamental iron work; full basement; Tennessee gray marble front columns, bases and steps; exterior walls faced with medium grad vitreous pressed brick; ornamental terra-cotta exterior trimmings and cornices; tile roof; Sunday-school building of similar architecture; 98x123 feet; three stories and basement; combined seating capacity 1250; boiler and fuel rooms in basement; marble partitions operated by electric motors. (Previously noted.)

Tenn., Knoxville.—Church of the Holy Ghost, Central St. and Pearl Pl., Rev. Father O'Connor, pastor, will repair edifice reported damaged by fire.

Tenn., Knoxville.—People's Tabernacle, Rev. W. E. Parry, pastor, will erect edifice on site of present building; 60x36 feet; basement; classrooms on ground floor.

Tex., Amarillo.—First Presbyterian Church will erect edifice. Address The Pastor, First Presbyterian Church.

Tex., Houston.—Sloan Street Methodist Episcopal Church will erect edifice on Nance St.; cost \$4,000. Address The Pastor, Sloan Street Methodist Episcopal Church.

Tex., Orange.—First Baptist Church, Rev. J. S. Pearce, pastor, will erect edifice at Fifth Ave. and Green St.; cost \$20,000.

Tex., Rivera.—Baptist Church will erect edifice. Address The Pastor, Baptist Church.

Tex., Temple.—First Baptist Church will,

It is reported, erect edifice; cost \$100,000. Address The Pastor, First Baptist Church.

Va., Richmond.—Highland Park Methodist Church will erect edifice. Address The Pastor, Highland Park Presbyterian Church.

W. Va., Warwood.—Lutheran congregation will erect church. Address The Pastor, Lutheran Church.

CITY AND COUNTY

Ala., Ragland.—Jail.—City will probably erect jail. Address The Mayor.

Ark., Little Rock.—Jail.—Pulaski County Quorum Court authorized erection of annex to county jail; cost \$30,000.

Ark., Little Rock.—Fire Station.—Board of Public Affairs will receive bids until November 7 at office of Charles E. Taylor, Mayor, to erect central fire station on West Markham St.; plans and specifications on file at office of Charles E. Thompson, architect, 594 Southern Trust Bldg., Little Rock; approximate cost, \$50,000; certified check for \$250.

Fla., St. Petersburg.—Hospital.—City will erect hospital. Address The Mayor.

Ga., Bainbridge.—City Hall.—Bids received at Council Chamber until November 8 to erect city hall; certified check for \$300; certified check for steam-heating plant, \$100; plans and specifications at office of William A. Edwards, architect, 632 Candler Bldg., Atlanta; sub-contractors desiring drawings and specifications may secure same on deposit of \$10; J. W. Callahan, Mayor; E. T. Hines, chairman.

Ga., Camilla.—City Hall.—City voted \$10,000 bond issue for city hall. Address The Mayor. (Lately noted.)

La., New Orleans.—Engine-house.—City will have plans prepared by City Architect Christy to erect engine-house No. 19. Address The Mayor.

Mo., Mexico.—Jail.—Audrian county will vote in November on \$25,000 bond issue for county jail. Address County Commissioners.

Tex., Dallas.—Hospital.—Board of Commissioners opened bids to erect Parkland Hospital; lowest bidders are as follows: Muliken Contract Co., at \$74,800, for general contract; Sanguinet & Bond, at \$495, for plumbing and gasfitting; Kaufman Heating & Engineering Co., at \$340, for steam heating; Otis Elevator Co., at \$2185, for electric push-button elevator; plans by Hubbell & Green, Dallas, call for structure 180x30 feet; fireproof construction. (Recently noted.)

COURTHOUSES

Ark., Melbourne.—Izard county will erect brick and stone courthouse; P. C. Sherrill, County Judge.

DWELLINGS

Ala., Birmingham.—Theodore Poull will erect residence at Ave. G and 21st St.; two stories; brick veneer; cost \$12,000.

Ala., Birmingham.—W. H. Duran will erect frame dwelling; two stories; cost \$3750.

Ark., Little Rock.—J. H. Leveck will erect two-story bungalow at 2600 Battery St.; cost \$5000.

Ark., Little Rock.—Henry H. Shell will erect dwellings at 2422 and 2426 Louisiana St.; two stories; cost \$3000 each.

D. C., Washington.—Pumphrey & Palmer, 311 E St. S. E., have plans by W. C. Allard, Washington, for several dwellings; 17x32 feet; brick; tin roof; cost \$5000; construction by owner. (George C. Pumphrey recently noted to erect dwellings.)

D. C., Washington.—W. K. Hill, Takoma Park, Washington, will erect two two-story brick dwellings at 722-24 22d St. N. W.; cost \$5800.

D. C., Washington.—C. W. Williams, 630 Randolph St. N. W., has plans by L. T. Williams for two two-story brick dwellings at 720-22 Princeton St. N. W.; cost \$5000; construction by owner.

D. C., Washington.—Walter R. Wilson has plans by N. T. Haller Company, Corcoran Bldg., Washington, for two two-story brick dwellings at 21-23 Harvard St.; cost \$5000; construction by owner.

Fla., Bartow.—Leon Hebb will erect bungalow on Wilson Ave.

Fla., Lakeland.—M. M. Fadeley has plans by A. J. MacDonough, Lakeland, for dwelling; cost \$3000.

Fla., Miami.—William K. Vreeland will erect residence in Bayonne Addition.

Fla., Miami.—Charles Greening is having plans for proposed residence revised by H. H. Mundy, Miami.

Fla., Miami.—August Geiger, Miami, is preparing plans for three dwellings in Broadmoor.

Fla., Tarpon Springs.—T. C. Pope, Wall Springs, Fla., will erect four four-room cottages.

Ga., Atlanta.—Anderson Bros. Co. will erect two two-story frame dwellings at 759-761 Gordon St.; cost \$3350 and \$2900, respectively; day labor.

Ga., Atlanta.—G. F. Turner will erect dwelling at 518 Ponce de Leon Ave.; two stories; brick veneer; cost \$5000; day labor.

Ga., Atlanta.—John Starr will erect residence at 411 Euclid St.; two stories; frame; day work; cost \$3500.

Ga., Atlanta.—W. C. Ashbrook will erect two-story frame dwelling at 411 Euclid Ave.; cost \$3500.

Ky., Louisville.—F. W. Schmidt will erect two-story frame dwelling at 1027 Baxter Ave.; cost \$3200.

Ky., Louisville.—W. H. McCarroll will erect four frame cottages at 1627-1701-5-7 Lee St.; cost \$2000 each.

Ky., Louisville.—G. W. Grant, 17 Kenyon Bldg., has plans by John H. Thomas for dwelling; 28x30 feet; separate contracts (Recently noted to cost \$3000.)

Ky., Winchester.—J. E. Grubbs has plans for residence on Hickman St.

La., New Orleans.—Mrs. Lizzie Kelly will erect residence on Lowerline St.; two stories; cost \$4670.

La., New Orleans.—J. L. Henikell will erect bungalow on Leda St.

Md., Baltimore.—Dr. Louis M. J. Becker, 35 N. Milton Ave., will erect residence at Toney Rd. and Randall Ave.

Md., Baltimore.—Harbrook Company, 24 Commerce St., will erect four dwellings; three stories; ordinary construction; hot-water heat; gas and electric lighting; slag roof; cost \$4000 each; construction by owner.

Md., Baltimore.—Modern Home Building Co., 815 Law Bldg., has plans by Stanislaus Russell, 2900 Clifton Ave., Baltimore, for 15 dwellings; 14x32 feet; ordinary construction; steam heat; combination gas and electric lighting; cost \$30,000; construction by owner.

Md., Baltimore.—James B. Newbold, 334 Equitable Bldg., will erect cottage on Edmondson Ave., Ten Hills; frame and stone.

Md., Baltimore.—Frank Novak, 647 N. Kenwood Ave., purchased about 35 acres of land on Harford Rd.; will develop for dwellings; install sewerage, construct pavements, etc.; each lot 15x100 feet; will erect about 25 dwellings at once, some porch front; ultimate development to cost about \$2,000,000; plans by Jos. F. Hirt, 647 N. Kenwood Ave.

Md., Baltimore.—Philip H. Minor, 2405 Garrison Ave., has plans by Stanislaus Russell, Clifton Ave., corner Poplar Grove, to erect seven dwellings on Linwood St. near Dillon; 13x40 feet; slag roof; hot air heat; cost \$7000.

Md., Baltimore.—G. H. Davidson, 2405 Presbury St., will expend \$4000 each to erect several dwellings at Hill Top Park; 25 feet 6 inches by 31 feet; frame; steam heat; electric lighting; asbestos or slate shingle roof; plans and construction by owner. (Recently noted to erect residence.)

Md., Baltimore.—E. J. Gallagher Realty Co., 602 S. Belmord Ave., will erect number of dwellings on east and west side of Streeter St. between Foster and Fleet Sts.; two stories; iron-spot brick; 12x40 feet; Carey roof; furnace heat; cost \$50,000; plans by E. J. Gallagher, Jr., 602 S. Belmord Ave., Baltimore; also purchased Whitridge property in northeastern section of city, containing 31 acres, traversed by Federal and Lanvale Sts., Lafayette, East and Highland Aves., and 1st, 2d, 3d, 4th and 5th Sts.; will develop; erect number of dwellings, etc.

Md., Mt. Washington.—Miss Elizabeth Hodes, 312 N. Charles St., Baltimore, Md., will erect 2½-story residence.

Md., Mount Washington.—Miss Sadie Dwyer, 2518 N. Charles St., Baltimore, Md., will erect residence; 2½ stories; frame.

Miss, Wesson.—Charles Dunbar, New Orleans, La., will erect residence.

Mo., Kansas City.—Dr. D. Walton Hall has plans by Root & Siemens for residence corner Westover Rd. and Bellevue Ave.; English domestic Gothic style.

Mo., Kansas City.—R. L. Rinker, 716 Commerce Bldg., will erect dwelling; 27x33 feet; ordinary construction; hot-water heat; gas and electric lighting; shingle roof; cost \$3750.

Mo., Kansas City.—T. J. and J. J. Green will erect residence at 4512, 4504 and 4506 Agnes St.; two frame and one vulcanite; total cost, \$4100.

Mo., Kansas City.—J. A. Bowman of Burgner-Bowman Lumber Co. will erect residence

in Mission Hills; plans by Henry F. Holt; cost \$25,000.

Mo., Kansas City.—J. B. Oberlein will erect residence at 3420 Kansas St.; stone veneer; cost \$3000.

Mo., St. Louis.—Laura Sommers will erect residence on Magnolia Ave.

Mo., St. Louis.—Charles A. Kalbfell, 1406 Linden Ave., has plans by Otto J. Boehner for 11 dwellings; 23x44 feet; one story; gas and electric lighting; composition roof; cost \$2250 each; construction by owner. (Recently noted.)

Mo., St. Louis.—Amedee J. Taussig, 313 Fullerton Bldg., will erect residence on Kingsburg Ter.; 12 rooms; two stories; 53x50 feet; fireproof construction; hot-water heat; slate roof; cost \$20,000; construction by owner. (See "Machinery Wanted.")

N. C., Hendersonville.—S. E. Crittenden of Jacksonville, Fla., and associates will erect 25 bungalows, etc. (See "Miscellaneous Structures.")

N. C., Waynesville.—Virginia Cottages, Inc., incorporated with capital stock of \$10,000; J. W. Hough, president, Norfolk, Va.; Geo. P. Adams, vice-president, and E. S. Bennett, secretary and treasurer, both of Blackstone, Va.; purchased 1000 acres of land and will erect cottages at Southern Methodist Assembly grounds; will construct lake to cover 200 acres, etc.

Okla., Oklahoma City.—M. W. Wier will erect one-and-a-half-story frame dwelling at 1005 W. 19th St.; cost \$4000.

Okla., Oklahoma City.—W. F. Bland will erect one-and-a-half-story frame dwelling at 804 W. 19th St.; cost \$4000.

S. C., Charleston.—C. Bissell Jenkins will erect residence on Boulevard and Limehouse Sts.; cost \$20,000.

S. C., Greenville.—Billy Laval will erect residence on Howe St.; cost about \$3000.

Tenn., Memphis.—John Sneed Williams is having plans prepared for residence on Highland Ave. south of Central Ave.; cost \$40,000.

Tex., Dallas.—B. G. Howard will erect dwelling at 5104 and 5024 Worth St.; two stories; frame; 10 rooms; cost \$3000 each.

Tex., Dallas.—R. Porter will erect residence at 131 Windomere St.; brick veneer; cost \$5500.

Tex., Dallas.—Hann & Kendall will erect one-story brick dwelling at 2104 Griffin St.; cost \$3150.

Tex., Dallas.—C. C. Slaughter will erect residence at 1805 Commerce St.; two stories; brick; cost \$4000.

Tex., Dallas.—W. E. Whitfield will erect residence at 4714 Swiss St.; five rooms; frame; cost \$3500.

Tex., Dallas.—W. L. Burdette will erect residence at 4618 Live Oak Ave.; eight rooms; two stories; frame; cost \$3000.

Tex., Dallas.—S. F. Murphy will erect residence at 3007 Colonial St.; one story; four rooms; brick; cost \$4000.

Tex., El Paso.—K. L. Hatfield, 216 Rio Grande St., will expend \$5000 to erect dwelling; 32x73 feet; brick; hot-water heat; asbestos shingle roof; plans by Gilson & Robertson, 325 Herald Bldg., El Paso; bids opened November 1. (Recently noted.)

Tex., El Paso.—S. E. Patton will erect bungalow at 503 Cliff St.; brick; cost \$3000.

Tex., Galveston.—J. E. Harrison will erect seven-room residence on Dallas Ave.; cost \$3000.

Tex., Houston.—W. W. Newton will erect nine-room residence on Berry Ave.; cost \$2500.

Tex., Orange.—Joe Miller, vice-president of Miller-Link Lumber Co., will erect number of tenant-houses.

Tex., Palacios.—Nolan Keller has plans by G. L. Murray to erect residence.

Tex., San Antonio.—J. H. Weymouth will erect two-story dwelling on San Pedro Pl.; cost \$4500.

Tex., Sutherland Springs.—A. B. Anderson will erect residence and store. (See "Stores.")

Va., Hot Springs.—B. T. Northern will probably rebuild residence reported burned at loss of \$20,000.

Va., Lynchburg.—Don P. Halsey will erect residence on 8th St.; hollow tile; composition roof; cost \$4000.

Va., Norfolk.—C. C. Fitch will erect frame residence on Armistead Bridge Rd.; cost \$2000.

GOVERNMENT AND STATE

D. C., Washington.—Federal Building.—Department of Commerce and Labor tentatively accepted proposition of Victor J. Evans,

Victor Bldg., 724-26 9th St. N. W., to erect building at Pennsylvania Ave. and 19th St. N. W., to be occupied by the department; will have plans prepared by Milburn, Helster & Co., Union Savings Bank Bldg., Washington; 11 stories and basement; 190x126 feet; pressed white brick; terra-cotta and stone trimmings; marble wainscoting on first floor; electric elevators; iron staircases and fire-escapes; sidewalk of 12 feet and court space of 21 feet; will intervene between building and street on both sides; building open on all sides by reason of 21-foot court on east side and court of 10 feet 9 inches in rear; reported cost \$600,000.

La., Burrwood—Government.—U. S. Engineer's Office, Edward H. Schulz, Major, Engineers, New Orleans, La., will receive bids until November 25 to furnish plant, labor and materials and construct buildings at Burrwood, Southwest Pass, Mississippi River.

Okl., McAlester—Postoffice.—Treasury Department, Office of Supervising Architect, Oscar Wenderoth, Washington, D. C. Proposals received until December 6 for construction, complete (including plumbing, gaspiping, heating apparatus, electric conduits and wiring, interior lighting fixtures and approaches), of United States postoffice and courthouse; three stories and basement; ground area of 7500 square feet; fireproof construction, except roof; stone and brick facing; tin roof; drawings and specifications obtainable from custodian of site at McAlester, or at this office, at discretion of supervising architect.

W. Va., Morgantown—Postoffice.—Treasury Department, Office of Supervising Architect, Oscar Wenderoth, Washington, D. C. Proposals received until January 2 for construction (including plumbing, gaspiping, heating apparatus, electric conduits and wiring, interior lighting fixtures and approaches) of United States postoffice; two stories and basement; ground area, about 5300 square feet; fireproof construction; stone facing; tin roof; drawings and specifications obtainable from custodian at site or at this office, at discretion of supervising architect.

HOTELS

Ark., Hot Springs.—M. A. Sheets of Terre Haute, Ind., is reported as to erect hotel, bank and office building. (See "Bank and Office.")

Ark., Hoxie.—John S. Gibson will probably have plans prepared by H. S. Grassmaster, Jonesboro, Ark., for hotel and store building recently noted; 148x90 feet; two stories; 42 guestrooms; ordinary construction; hot-water heat; electric lighting; Carey's roofing; cost \$21,600. (See "Machinery Wanted.")

Fla., Jacksonville.—Central Investment Co. will erect building for stores and hotel or apartments. (See "Stores.")

Fla., Lakeland.—Melver & MacKay, architects, Ocala, Fla., state plans for hotel to be erected by Kibler Bros., Dunnellon, Fla., will be ready for bids in about two weeks. (Recently noted to cost \$100,000.)

Fla., Miami.—Walter Waldin, Dan Hardie, Peter Ulendorf and associates are reported as planning to erect six-story hotel.

Fla., Tarpon Springs.—Peter Economos, proprietor of Ferns Hotel, will erect hotel building on Tarpon Ave. west of Ferns Hotel; three stories; brick; 25 guestrooms; running water; electric lights.

Ga., Rome.—C. Terehune, R. J. Ragan and others are interested in organization of East Rome Hotel Co. with capital stock of \$17,500 to erect hotel; three stories; brick; first floor to be occupied by East Rome Bank and Graham Pharmacy; other floors for hotel.

Ky., Louisville.—Preston Hotel Co. has plans by D. X. Murphy & Bro., Louisville, to remodel building at 111 S. 3d St.; cost \$12,000.

Ky., Pineville.—G. H. Reese and associates will erect hotel; cost \$43,000.

La., Morgan City.—H. Jordan Mackenzie, architect, 606 Common St., New Orleans, La., will receive bids until November 2 to erect brick hotel and store building for A. A. Freed, 630 Gravier St., New Orleans, La.; three stories; brick; electric lighting; elevator; cost \$35,000. (Recently noted.)

N. C., Charlotte.—J. A. Darwin, Athens, Ga., is having plans prepared by Hook & Rogers, Charlotte, to erect hotel at Cleveland Springs; central portion of building to be five stories; four-story wing on each side; fireproof-tile and terra-cotta construction; colonial columns to support upper balcony in center of building; wide verandas, with colonial columns extending from center of porch full length of wings; clubrooms in center of building; dining-room and kitchen in south wing; cost about \$200,000. (Previously reported under N. C., Cleveland.)

N. C., Wilmington.—Wrightsville Beach Hotel Co., E. L. Hinton, manager, has plans by J. F. Leitner, Wilmington, N. C., for addition to hotel; two stories; mill construction; electric lighting; day labor. (Recently noted as Seashore Hotel Co.)

Tex., Bellaire.—Messrs. Stowe are preparing plans to erect country inn at Crawford Place; 16 rooms.

Tex., Corpus Christi.—H. A. Reuter, San Antonio, Tex., is preparing plans for hotel; seven stories; 300 rooms; reinforced concrete construction; heating and lighting not determined; four elevators; gravel roof; cost \$600,000. (P. M. Swearingen of San Antonio and Hazen Follansbee of Corpus Christi recently reported as to erect hotel.)

Tex., Palestine.—R. A. Johnson of Jacksonville, Tex., proprietor of Pearl Hotel, plans organization of company to erect hotel to cost \$75,000 to \$100,000.

W. Va., Wheeling.—Windsor Hotel Co. organized with \$400,000 capital stock by E. B. Carney, W. B. Irvine, both of Wheeling; P. B. Shook of Youngstown, Ohio, and others; will award contract at \$374,680 (exclusive of interior marble furnishings) to Caldwell & Drake, Columbus, Ind., to erect hotel; 207 rooms with lavatories, hot and cold water and toilet; 124 rooms with private bath; 12 stories; fireproof; three electric elevators; roof garden and sun parlor; mahogany in lobby, restaurant and first floor; plans will be prepared by H. Zeigler Deltz, St. Louis, Mo. (Previously noted.)

MISCELLANEOUS

Ala., Birmingham—Zoo.—Birmingham Zoological Association, Frank W. Smith, temporary president, states zoo buildings to be erected will at present be but temporary; construction by company's force. (Recently noted.)

Ala., Hartselle.—Fair.—Morgan County Fair Association, \$5000 capital stock, incorporated with A. P. Howell president, J. L. Day vice president, Clyde Sharp secretary; purchased 25 acres of land and will erect fair buildings.

Ark., Little Rock—Clubhouse.—Quapaw Club will erect clubhouse; W. B. Smith, president building committee.

Fla., Miami—Pavilion, etc.—Ocean Beach Amusement Co., Chas. A. Muller, general manager, rejected bids to erect casino, dancing pavilion, etc., and will erect by company's force under direction of Mr. Muller; 80x100 feet; fireproof walls; electric lighting; plans by Mr. Mundy of Miami. (Lately noted.)

Ga., Waycross—Restaurant.—H. A. Cannon will erect restaurant building on Teabeau St.; two stories; brick.

Md., Baltimore—Hospital.—Johns Hopkins Hospital trustees, Broadway and Monument Sts., will erect addition to hospital to be called James Buchanan Brady Urological Institute; cost about \$200,000; money available about April 1, 1913; tentative plans under consideration.

N. C., Hendersonville.—Clubhouse.—S. E. Crittenden of Jacksonville, Fla., and associates purchased Noterman residence and 25 acres of land surrounding same; will convert residence into clubhouse for Colonial Club, erect executive building with roof garden, 25 bungalows and construct artificial lake.

N. C., Wilmington.—Clubhouse.—Cape Fear Country Club, W. A. Dick, president, will issue \$20,000 of bonds to liquidate debt and improve clubhouse.

Tex., Houston—Clubhouse.—Park Place Social Club will erect clubhouse; plans by C. N. Nelson.

Tex., Houston—Undertaking.—Sid Westheimer will have plans prepared by C. D. Hill & Co., Houston, for undertaking establishment at Prairie Ave. and Caroline St.; four stories, with basement; foundation to support additional stories; reinforced concrete; cost \$50,000. (Previously noted.)

Va., Lexington—Veterinary Hospital.—Dr. D. B. Glover plans to erect veterinary hospital on Randolph St.

W. Va., Princeton—Hospital.—A. F. Wyssong of Princeton is preparing plans for hospital; 50x92 feet; three stories; pressed brick; will let contract about November 8. (Drs. Gordon Todd, B. W. Bird and others recently noted to erect hospital.)

RAILWAY STATIONS, SHEDS, ETC.

Ala., Anniston.—Southern Railway Co., H. W. Miller, assistant to the president, 621

Equitable Bldg., Atlanta, Ga., will improve freight depot.

Ala., Montgomery.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., is inviting bids for improvements and additions to union station; will enlarge express building to 50x44 feet; extend baggage-room about 21 feet, etc.; cost of improvements about \$20,000.

Ala., Sylacauga.—Central of Georgia Railway Co., C. K. Lawrence, chief engineer, Savannah, Ga., will, it is reported, erect depot; cost \$20,000 to \$25,000.

Ga., Buford.—Southern Railway Co., H. W. Miller, assistant to the president, 621 Equitable Bldg., Atlanta, Ga., will erect passenger station; half stucco finish; tile roof; bids invited.

Md., Frostburg.—Western Maryland Railroad Co., H. R. Pratt, chief engineer, Hillen Station, Baltimore, Md., will, it is reported, erect freight depot on E. Main St.

N. C., Lexington.—Carolina & Yadkin River Railroad, T. J. Jerome, vice-president, Salisbury, N. C., will, it is reported, erect depot at Randolph and Gray Sts.

N. C., Winston-Salem.—Winston-Salem Southbound Railway Co. has plans by J. F. Leitner, Wilmington, N. C., for freight depot; 40x240 feet; ordinary construction; steam heat; electric lighting; tin roof; construction by company. (Recently noted.)

Tenn., Lenoir City.—Southern Railway Co., H. W. Miller, assistant to the president, 621 Equitable Bldg., Atlanta, Ga., will erect passenger station; also convert present combination depot into freight station; tile or slate roof. (Previously noted to cost \$7000.)

Tex., Somerville.—Gulf, Colorado & Santa Fe Railway Co., F. Merritt, chief engineer, Galveston, Tex., will expend \$5500 to erect storehouse for car-repairing department; 50x113 feet; platform 10x113 feet; mill construction; tar and gravel roof; construction by company's force. (Contract recently noted awarded.)

Tex., Taylor.—Missouri, Kansas & Texas Railroad, A. M. Atcheson, chief engineer, Dallas, Tex., has plans to erect passenger station; cost \$40,000.

Va., Chatham.—Southern Railway, H. W. Miller, assistant to president, 621 Equitable Bldg., Atlanta, Ga., is reported as to expend \$30,000 for improvements to station; will replace present wooden tank with steel tank of greater capacity, etc.

Va., Danville.—Danville & Western Railway Co., A. B. Andrews, president, Raleigh, N. C., will, it is reported, erect depot.

SCHOOLS

Ala., Linden.—City will erect high school. Address The Mayor.

Ga., Camilla.—City voted \$5000 school bond issue. Address The Mayor. (Lately noted.)

La., Homer.—Claiborne parish voted \$40,000 of bonds to erect school; two stories and basement; ordinary construction. Address School Board. (Lately noted.)

La., New Orleans.—City Council appropriated \$100,000 to erect school in square bounded by Peters, Octavia, Chestnut and Coliseum Aves.; two stories and basement; brick; Charles R. Kennedy, City Comptroller. (Recently noted to receive bids until November 4.)

La., Opelousas.—City voted \$65,000 bond issue to erect school building. C. H. Thompson, Opelousas, may be addressed.

La., Plaquemine.—City accepted plans for high school and will soon invite bids. Address The Mayor.

Miss., Pickens.—City will issue \$6500 of bonds to erect school; cost \$5000 to erect school; W. S. Pierce, Mayor.

Mo., St. Louis.—Kenrick Seminary, Rev. M. S. Ryan, president, is having plans prepared by Comes, Imbs & Preuss, St. Louis, for seminary building; cost \$350,000.

N. C., Gastonia.—City will vote November 30 on \$10,000 school bond issue. Address The Mayor.

Okl., Muskogee.—Trustees of Woman's College and Board of Education of Methodist Conference will erect main building at college, to cost \$30,000; additional buildings to be erected later include boys' dormitory, science hall, etc.

Tenn., Johnson City.—City will vote November 21 on \$50,000 bond issue to erect high school. Address The Mayor.

Tex., Buffalo Gap.—Buffalo Gap school district voted bonds to erect school; cost about \$6000. Address School Trustees.

Tex., Campbell.—School Board will open bids October 23 to erect two-story brick

school; plans may be had upon deposit of \$20 with chairman of board or C. H. Leubach, Mineral Wells, Tex.

Tex., Gollad.—Gollad Independent school district voted \$20,000 of bonds to erect school. Address School Trustees. (Recently noted.)

Tex., Henderson.—City voted bonds to erect \$25,000 school in North Henderson. Address The Mayor.

Tex., Irving.—Irving Independent school district voted \$13,000 bond issue for school. Address School Trustees.

Tex., Smithfield.—Tarrant County Commissioners, Fort Worth, Tex., will erect \$7800 school.

Tex., Fort Worth.—Tarrant County Commissioners will erect school at South Fort Worth.

W. Va., Simpson.—City will vote November 5 on \$8000 bond issue to build school. Address The Mayor.

STORES

Ala., Birmingham.—U. S. and J. P. Mudd will erect store at 1st St. and Avenue F; one story; frame; cost \$5000.

Ala., Birmingham.—W. L. Murdoch & Co. will erect commercial building on First Ave. between 23d and 24th Sts.; four stories and basement; cost \$30,000.

Ala., Birmingham.—Franklin, Stiles & Franklin will erect business building on First Ave. between 23d and 24th Sts.; four stories and basement; cost \$30,000.

Ala., Birmingham.—Emmet Collins will erect business building at Second Ave. and 2d St.; 50x100 feet; two stories; four stories and basement; concrete or brick reinforced; elevators; fireproof; cost \$30,000; plans by Harry B. Wheelock, Birmingham.

Ala., Ensley.—Ramsay & McCormack will erect one-story brick building at Avenue E and 19th St.; cost \$8000.

Ala., Sylacauga.—H. B. Foster will erect business building.

Fla., Jacksonville.—Central Investment Co. will erect building on West State St.; four stories; pressed brick; frontage 92 feet; five stories on ground floor; upper floors to contain 55 rooms for hotel or apartments.

Fla., Jacksonville.—T. Frederick Davis will erect five one-story buildings on Spruce St. between Jackson and Dora Sts.; frame.

Ga., Rome.—C. Terehune and associates are promoting organization of company to erect store, bank and hotel. (See "Hotels.")

Ky., Bowling Green.—Davidson Bros. Wholesale Grocery Co. is reported, purchased 100x100 ft. lot on Adams St. to erect brick store; 180x200 feet. (Recently erroneously mentioned under Ky., Louisville.)

La., Morgan City.—H. Jordan Mackenzie, architect, 606 Common St., New Orleans, La., will receive bids until November 2 to erect store and hotel building. (See "Hotels.")

Md., Easton.—W. T. Hubbard has plans to remodel stores at Dover and Harrison Sts.; will rebuild to depth of 44 feet; one store 15x35 feet, other 15x29 feet; install cold-storage plant, etc.

Mo., Joplin.—Newman Mercantile Co. will remodel burned building and erect additional structure for stores and offices. (See "Bank and Offices.")

Mo., Kansas City.—W. Y. Gregg will erect store and apartment building. (See "Apartment-houses.")

Mo., Kansas City.—J. W. Hardacre will erect store at 425 Troost St.; brick; cost \$3000.

Mo., Kansas City.—H. S. McDonald will erect store and apartment-house. (See "Apartment-houses.")

Mo., St. Louis.—Charles W. Gorges will erect store and apartment buildings. (See "Apartment-houses.")

Mo., St. Louis.—Dranek Realty Co. is having plans prepared by Charles H. Deterling to convert one-story warehouse on north side of Chestnut St., extending from 19th to 20th St., into 26 stores.

Mo., St. Louis.—G. H. Boehmer and associates will erect store, office and apartment building. (See "Apartment-houses.")

N. C., Asheville.—G. F. Stradley acquired site at Chestnut and Charlotte St. and will erect store and apartment-house; stone and concrete foundation; superstructure concrete, brick and stucco; fireproof; plate glass fronts in stores; three stories.

S. C., Anderson.—Col. C. A. Reed is having plans prepared by J. H. Caney to erect store on Main St.; one story, with foundation for additional stories.

N. C., Asheville.—Ancient Free and Accepted Masons will erect store and lodge.

building at Main and Woodfin Sts. (See "Association and Fraternal.")

N. C., Asheville.—R. E. Bowles will erect store on N. Main St.; 31x100 feet; two stories and basement; stone or brick; fireproof; plate-glass front.

N. C., Asheville.—Asheville Aerie, Fraternal Order of Eagles, will erect store and lodge building. (See "Association and Fraternal.")

Ola., Geary.—L. M. Hartley will erect brick building to replace structure reported burned.

Okla., Geary.—J. L. Gable will erect brick building to replace structure reported burned.

Tex., Dallas.—Clarence E. Lutz will erect business building on Commerce St.; pressed brick; two stories and basement; concrete covered steel frame.

Tex., Beaumont.—R. B. Henry has not definitely determined upon plans for brick business building. (Recently noted.)

Tex., Bloomington.—Earl Bundick will erect store on Shepley St.

Tex., El Paso.—J. J. Crawford will erect store on Broadway; one story; brick; cost \$5000.

Tex., Houston.—Southern Loan & Investment Co. will, it is reported, erect two three-story buildings; one on Main St.; cost \$30,000; other at Capitol and San Jacinto Sts.; cost \$25,000.

Tex., Humble.—Woodmen of the World will erect lodgerooms; containing offices and stores. (See "Association and Fraternal.")

Tex., Junction.—Schreiner-Hodges Company will expend \$6000 to erect store building; 48x96 feet; lighting not decided; tin roof; construction under supervision of company. (Recently noted.)

Tex., Lancaster.—White & Co. have plans for store and bank building. (See "Bank and Office.")

Tex., San Antonio.—Estate of Dr. Ferd Herff will erect store and office building on E. Hoffman St.; cost \$25,000.

Tex., Sutherland Springs.—A. B. Anderson will erect store and residence at Second and Anderson Ave.

Tex., Timpson.—R. T. Blair will erect store on South 1st St.

Tex., Yoakum.—Ulmann, Stern & Krause will erect store.

Tex., Waco.—Rotan Realty Co. is having plans prepared to remodel Hotel Proctor; will erect additional story and provide storerooms on Franklin St.

Tex., Waco.—E. M. Almsworth and Mrs. E. M. Hunter, the latter of Denver, Col., will erect store at 928 Franklin St.; two stories; pressed brick; 50x50 feet.

Tex., Welmar.—Charles Fahrenthold will erect three store buildings; brick construction. (Recently noted.)

Va., Berkeley, Station Norfolk.—M. Berlin will erect business building; two stories; brick; two stories; cost \$6000.

Va., Norfolk.—E. T. Hunter and W. H. L. White will expend \$5000 to alter building at 176 Water St.; brick.

Va., Norfolk.—S. D. Scott has plans by Neff & Thompson, Norfolk, for three stores on Granby near Queen St.; 77x115 feet; concrete and brick; decorative glass front; following contractors have been invited to bid: Baker & Brinkley, Richardson & Son, Richardson Construction Co., Turpin Bros., E. L. Myers and J. H. Pierce, all of Norfolk, and General Fireproofing Co. and Hammett Fireproofing Co.

Va., Richmond.—M. C. Branch will expend \$4000 to repair brick building at 1109-13 East Cary St.

W. Va., Princeton.—A. F. Wysong of Princeton is preparing plans for business building; 51x60 feet; three stories; brick.

THEATERS

Fla., Jacksonville.—Interstate Amusement Co., Chicago, Ill., has plans by John Ebersen, Chicago, Ill. (company's architect) for Orpheum Theater at Duval and Main Sts.; six stories; lower portion of solid masonry supporting massive columns which carry carved entablatures, pediments and cornice; upper portion of buff brick with carved stone trimmings; 112½x93 feet; fireproof; reinforced concrete construction; seating capacity, 2200; cost \$275,000; Charles A. Leach, Jr., is local manager. (Recently noted.)

Ky., Louisville.—National Theater Co. will expend \$250,000 to erect theater and office building; 159x140 feet; theater to have seating capacity of 3000; fireproof construction; steam (ventilation and cooling system) heat; two electric elevators; composition roofing; plans by Joseph & Joseph, 307 Commercial

Bldg., Louisville, will be ready by November 15. (Plans previously noted prepared by Joseph & Joseph of Louisville and Albert Kahn, Detroit, Mich.)

Md., Baltimore.—Pastime Co., 2022 Greenmount Ave., will erect moving-picture theater on Greenmount Ave. near 21st St.

Tenn., Jackson.—D. L. Williamson is reported as to erect theater.

Tex., McKinney.—F. B. Pope opens bids November 1 to erect theater; plans at office of Mr. Pope and office of Lang & Wittich, architects, Life Bldg., Dallas, Tex.; certified check for 2 per cent. of bid. (Lately noted.)

WAREHOUSES

Ala., Birmingham.—G. W. Hopson & Sons, Ave. A and 15th St., will rebuild warehouse reported burned; loss about \$60,000.

Ala., Birmingham.—Mortgage Trust Co., Tom Bennett, manager, will finance erection of storage building on 2d St.; 8 or 10 stories.

Fla., Miami.—McCrinmon Lumber Co. has plans by H. M. King and will soon invite bids to erect warehouse on 15th St.; building to be occupied by McCrimmon Lumber Co. and Carpenter Feed Store; 95x134 feet;

two stories; reinforced concrete; cost about \$17,500.

N. C., Nashville.—Nash County Storage Warehouse Co., capital stock \$50,000, incorporated by S. F. J. Ellen, J. B. Joyner and others.

N. C., Vanceboro.—Ernui Union Warehouse Co., capital stock \$1000, incorporated by T. M. Arthur, C. J. Hent and others.

N. C., Winston-Salem.—Standard Oil Co., main office 26 Broadway, New York, will, it is reported, erect storage warehouse, office building and three oil tanks; cost \$15,000.

Tex., Alvin.—Wells, Fargo & Co. Express, 51 Broadway, New York, B. D. Caldwell, president, will, it is reported, erect warehouse.

Tex., Houston.—S. J. Westheimer will erect at once concrete warehouse; four stories; freight elevator, etc.; also plans to erect next year reinforced concrete warehouse; eight stories; foundation for 10 stories.

Tex., Paducah.—Paducah Warehouse Co. incorporated with capital stock of \$3000 by L. W. Simpson, Ed. Oatman, W. H. Abernathy and others.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ala., Birmingham.—R. S. Warner awarded contract to W. A. Lockhart to erect apartment and store building at 24th St. and Sixth Ave.; site 60x100 feet; brick and white glazed terra-cotta; three stories on Sixth Ave.; plans by Edgar L. Love, Birmingham; cost \$20,000.

D. C., Washington.—H. P. Baldwin, 1829 Jackson St. N. E., awarded contract to erect store and apartment building. (See "Stores.")

Ga., Savannah.—Selig Eleholz, 803 W. Broad St., will expend \$20,000 to erect eight apartment-houses, 36x41 feet, and one 36x32 feet; mill construction; electric lighting; tin roof; contract recently noted awarded to W. J. Burney, 312 Duffy St., Savannah; plans also by Mr. Burney.

Tenn., Memphis.—Mrs. M. Sartorius awarded contract to Thomas James, Memphis, to erect apartment-house at 1733 Poplar Ave.; 24 rooms; cost \$10,000; brick and stone.

ASSOCIATION AND FRATERNAL

Tex., Cameron.—San Andres Masonic Lodge awarded contract to Mr. Hargrove, Caldwell, Tex., to erect lodge building. (Recently noted.)

BANK AND OFFICE

Ark., Arkansas City.—Desha Bank awarded contract to Albert Simms to erect addition of three stories to bank; cost \$15,000. (Recently noted.)

Ga., Atlanta.—Foote & Davies purchased building at Edgewood Ave. and Pryor St. and will remodel for office and store; rebuild first and second floors, install plate-glass front, etc.; plans by A. Ten Eyck Brown, Atlanta; cost \$15,000; contract awarded to W. E. Mashburn, 210 Rhodes Bldg., Atlanta; will use about 15 tons steel and cast iron and several hundred feet steam radiators.

Ga., Augusta.—Citizens' and Southern Bank, Mills B. Lane, president, Savannah, Ga., awarded contract to Charles McCaul Company, Philadelphia, Pa., to erect bank building; modified Grecian Doric architecture; 90x50 feet; one and two stories; white granite; ceiling 40 feet high; second story 15 feet wide at front of building for directors' room; rooms for officers below; remainder of building one story; fixtures and interior decorations of polished gray Tennessee marble, bronze and mahogany; cabinet work; waterproof basement; cost about \$100,000; plans by Mowbray & Uffinger, 56 Liberty St., New York. (Recently noted.)

Md., Baltimore.—Annie Cohen awarded contract to J. L. Robertson, 524 Law Bldg., Baltimore, for alterations to building at 700 N. Gay St. for Calvert Bank; will convert first floor into offices; install plate-glass front, etc.

Tex., Cleveland.—First National Bank awarded contract to Robert Shearer, Lufkin, Tex., to erect bank building.

Tex., Corpus Christi.—H. R. Sutherland awarded contract to erect office and store building. (See "Stores.")

Tex., Victoria.—John J. Welder awarded contract to Gordon Jones Construction Co., San Antonio, Tex., to erect bank and office building; five stories; 94x37 feet; fireproof; steam heat; electric lights; elevator; tile roofs; cost about \$200,000; plans by C. H.

Page & Bro., Austin, Tex., and Hull & Praeger, Victoria. (Recently noted.)

Tex., Waco.—C. L. Johnson & Son awarded contract to erect office and warehouse building. (See "Warehouses.")

CHURCHES

Fla., Miami.—First Methodist Episcopal Church awarded contract to J. J. Holly, Miami, for concrete construction and carpenter work on edifice; about 80x100 feet; hot-water heat; tile roof; cement sidewalks; plans by George L. Pfeiffer, Lemon City, Fla. (Previously noted.)

Ga., Valdosta.—Building committee of First Methodist Church awarded contract to J. Hamp Sirmans to enlarge present structure; plans by L. R. Benz.

Tex., Killeen.—Methodist Church, Rev. C. C. Hightower, pastor, awarded contract to J. E. Wood of Brownwood, Tex., to erect church; brick; steam heat; 900 seating capacity.

Tex., St. Jo.—Presbyterian congregation will erect church; 42x44 feet; ordinary construction; plans and construction by William Berry of St. Jo.

CITY AND COUNTY

La., New Orleans.—Casino and Boathouse. Park Commissioners awarded contract at \$34,043 to W. J. Neville to erect casino and boathouse at City Park; reinforced concrete; plans by Nolan & Terro. (Lately noted.)

N. C., Greensboro.—Market.—City awarded contract at \$16,700 to Milton Construction Co., Washington, D. C., to erect market-house on South Davis and Sycamore Sts.; brick; 155x55 feet; one story; concrete floors, etc. (Lately noted.)

COURTHOUSES

Tex., Cleburne.—Johnson County Commissioners awarded contract at \$184,000 to American Construction Co., Houston, Tex., to erect courthouse; three stories and basement; fireproof; promenade tile roof; plans by Lang & Wittich, Dallas, Tex. (Recently noted.)

Tex., Jefferson.—Marion County Commissioners awarded contract to L. R. Wright & Co., Dallas, Tex., to erect courthouse; fireproof construction; fireproof partitions and floors; stairs and wainscoting of fireproof and sanitary materials; boiler-room, fuel-room, record vaults, etc.; cost \$41,000; plans by Elmer G. Withers. (Recently noted.)

DWELLINGS

D. C., Washington.—John W. Sanderson, 638 A St. S. E., awarded contract to John Simpson to erect dwelling at 115 Keokuk St.; cost \$7400; plans by E. D. Ryerson, Chevy Chase, Md.

Fla., Miami.—C. E. Speyer awarded contract to Art Stone Construction Co., Miami, to erect dwelling in Broadmoor; patent process blocks; waterproof; Spanish style; corners of rough stone; plans by August Geiger, Miami.

Ga., Atlanta.—Charles V. Rainwater will erect residence on Springdale Rd.; two stories; brick veneer; 12 rooms; hot-water heat; electric lighting; slate roof; cost \$18,000; plans by Edward E. Dougherty, Atlanta;

contract awarded to C. B. Myers Construction Co. of Atlanta.

Ga., LaGrange.—W. B. Cotter awarded contract to Cleaveland & Kellum Lumber Co. to erect residence on Vernon St.

La., Morgan City.—J. F. Prochaska awarded contract to J. W. Taylor of New Iberia, La., to erect brick residence.

Md., Baltimore.—Parkway Realty Co. has plans by F. E. Beall, 213 St. Paul St., Baltimore, for four dwellings on Belmont Ave. near 25th St.; three stories; iron-spot brick; cost \$12,000; contract awarded.

Md., Roland Park.—Dr. M. G. Porter, 414 Woodlawn Rd., awarded contract to G. Walter Tovell, 1126 N. Eutaw St., Baltimore, Md., to erect residence; 2½ stories; stucco; plans by E. L. Palmer, 112 Elmhurst Rd., Roland Park. (Previously noted.)

Miss., Ellisville.—W. M. Baker awarded contract to erect residence.

N. C., Davidson.—Delburg Cotton Mill Co., Inc., will erect number of dwellings for operatives; 26x34 feet; contract awarded to W. E. Potts of Davidson.

Tex., Brenham.—Mrs. Pauline Graber awarded contract to J. M. Hyde to erect dwelling; seven room; electric lighting; shingle roof; cost \$4800. (Recently noted.)

Tex., Cameron.—W. A. Taber awarded contract to erect residence at Hefley Heights; two stories; 10 rooms.

Tex., El Paso.—A. G. McCann awarded contract to Phoenix-El Paso Building Co. to erect California bungalow on Waco St.; four rooms; cost about \$3000.

Tex., Orange.—M. G. Ready will expend \$4000 to erect dwelling; 11 rooms and bath; four porches; brick; electric lighting; cypress shingle roof; plans and construction by W. T. Durham, Orange. (Recently noted.)

Va., Norfolk.—J. R. Doles will expend \$3500 each to erect two dwellings; 40x50 feet; ordinary construction; gas lighting; gravel roof; contract recently noted awarded to McClannan & Bro., 136 Cooprew Ave., Norfolk.

Va., Norfolk.—W. E. Bunting will erect two frame residences, one on Omohundro Ave., to cost \$2900, other to cost \$3000; awarded contract to W. H. Mercer.

Va., Rosemont (not a postoffice).—Richard Gibson, Alexandria, Va., awarded contract to E. G. Hefflin, Fredericksburg, Va., to erect proposed dwelling; 48x30 feet; two stories, cellar and attic; brick; cost \$10,000; plans by Philip N. Stern, Fredericksburg, Va.

W. Va., Wheeling.—James Embien awarded contract to J. S. Butts & Son, 191 16th St., Wheeling, to erect proposed dwelling; 16x30 feet; Carey's roofing; cost \$5000.

HOTELS

Ga., Atlanta.—W. F. Winecoff awarded contract to George A. Fuller Company, Munsey Bldg., Washington, D. C., to erect hotel; 60x70 feet; 15 stories and basement; 200 rooms; 200 baths; fireproof steel construction; electric elevators; cost \$300,000; plans by W. L. Stoddard, 30 W. 38th St., New York. (Previously noted.)

N. C., Kenilworth (not a postoffice).—Kenilworth Development Co. awarded contract. It is reported, to Caldwell Construction Co., Chicago, Ill., to erect Kenilworth Inn; about 200 rooms; cost \$250,000. (Previously noted.)

W. Va., White Sulphur Springs.—White Sulphur Springs, Inc., controlled by Chesapeake & Ohio Railway, Decatur Axtell, first vice-president, Richmond, Va., will expend \$650,000 to erect hotel; fireproof construction; six stories and basement; 370x80 feet; steam heat; electric lighting; electric elevator; plans by Frederick J. Sterner, 139 E. 19th St., New York; contract recently noted awarded to George A. Fuller Company, Munsey Bldg., Washington, D. C.

MISCELLANEOUS

Va., Roanoke.—Hospital.—Shenandoah Hospital, Inc., Dr. J. H. Dunkley, president, awarded contract to H. E. Hogan to erect Shenandoah Hospital at 712 Campbell Ave.; three stories; frontage 70 feet; encircled with double porches; colonial style; red brick cased; white trimmings; electric light signal system; accommodations for 40 patients; several rooms with private baths; electrical appliances, sweat baths, x-Ray equipment; steam heat; cost \$18,000.

RAILWAY STATIONS, SHEDS, ETC.

N. C., Gastonia.—Southern Railway Co., H. W. Miller, assistant to the president, 621 Equitable Bldg., Atlanta, Ga., awarded contract to George Leigh & Co., Louisa, Va., to erect passenger station; brick; tile roof. (Previously noted to cost \$20,000 to \$25,000.)

SCHOOLS

Ala., Bay Minette.—City awarded contract to W. O. Thompson to erect annex to high school.

Ga., Oxford.—Emory College awarded contract to W. W. Griffin, 1013 Candler Bldg., Atlanta, Ga., to erect dormitory; 56x187 feet; ordinary construction; vapor vacuum heat; tar and gravel roof; cost \$45,000; plans by Hentz & Reid, 993 Candler Bldg., Atlanta, Ga. (Previously noted.)

N. C., Lenoir.—Lenoir Female College executive committee awarded contract to N. Underwood, Durham, N. C., to erect north wing of college building; cost about \$16,000. (Recently noted.)

Tex., Winona.—School trustees awarded contract to G. C. Taylor, Winona, to erect school building; 60x80 feet; ordinary construction; composition roofing; cost \$7,000; plans by F. G. Shaw, Fort Worth, Tex. (Recently noted.)

W. Va., Buckhannon.—West Virginia Wesleyan College, Carl G. Doney, president, it is reported, awarded contract at \$27,000 to R. Post & Z. Westfall to erect Hammond Science Hall. (Previously noted.)

STORES

Ala., Birmingham.—R. S. Warner awarded contract to erect store and apartment building. (See "Apartment-houses.")

Ala., Gadsden.—Rev. J. M. Chadwick awarded contract to Gadsden Brick Co. to erect store; two stories; brick; cost \$25,000.

D. C., Washington.—H. P. Baldwin, 1820 Jackson St. N. E., awarded contract to W. R. Coon, 2414 Irving St. N. E., Washington, to erect store and apartment building at 3101 20th St. N. E.; cost \$4500.

D. C., Washington.—Louis Kollipski, 631 I St. N. W., awarded contract to William C. Blundon, 15 Rhode Island Ave. N. W., Washington, to erect store at 400 K St. N. W.; cost \$4,000; plans by A. Heitmueller, 1307 14th St. N. W., Washington.

Ga., Atlanta.—Foote & Davies will remodel building for store and office. (See "Bank and Office.")

La., Lake Charles.—Muller Realty Co. awarded contract to Corbin Bros., Jeanerette, La., to erect store building; three stories; cost \$60,000. (Recently noted.)

La., New Orleans.—S. B. Hollander awarded contract to erect store and theater building; two stories; 30x50 feet each; theater in rear; brick; slate roof; plans by N. Todd, 822 Baronne St., New Orleans. (Recently noted.)

La., New Orleans.—Julius Koch of New Orleans, it is reported, has contract to erect store at Dryades and Thalia Sts.; two stories; fireproof; plans by O. P. Mohr, 830 Canal St.

Tex., Corpus Christi.—H. R. Sutherland awarded contract to erect proposed store and office building; 50x100 feet; brick; gas and electric lighting; gravel roof; cost \$30,000.

Tex., Ennis.—C. B. Pittman awarded contract to erect three stores on South Dallas St.; one story; brick.

Tex., Truscott.—L. Chesser awarded contract to erect business building.

Tex., Victoria.—John J. Welder awarded contract to Gordon-Jones Construction Co., San Antonio, Tex., to erect store and office building. (See "Bank and Office.")

Va., Norfolk.—Miller, Rhoads & Swartz are reported to have awarded contract to Mattox & Davis, Norfolk, to erect annex to store building; three stories; reinforced concrete and brick; cost \$40,000; plans by B. F. Mitchell, Norfolk. (Previously noted.)

Va., Petersburg.—Mrs. A. O. Percival awarded contract to J. W. Davis, Newport News, Va., to erect business block; one story and basement; 75 feet deep; will contain five stores.

W. Va., Moundsville.—J. H. Beam Drug Co. awarded contract to Riggs Bros., Moundsville, to erect store on Jefferson Ave.; three stories.

THEATERS

Ala., Birmingham.—H. M. Newsome awarded contract to C. M. Allen to erect motion theater; 30x140 feet; fireproof construction; steam heat; electric lighting; gravel roof; cost \$25,000; plans by H. B. Wheelock. (Recently noted.)

La., New Orleans.—S. B. Hollander awarded contract to erect store and theater buildings; 30x50 feet each; theater in rear. (See "Stores.")

WAREHOUSES

Ala., Gadsden.—Southern Manufacturing Co. awarded contract to erect warehouse; brick.

Md., Baltimore.—Consolidated Cotton Duck Co., Continental Bldg. (International Cotton Mills Corporation, 86 Worth St., New York), awarded contract to Concrete Engineering Co., Boston, Mass., to erect two warehouses at Woodberry; one 60x332 feet, other 96x334 feet; five stories; concrete foundations; five-ply plastic roof; steam heat; plans by Lockwood, Greene & Co., 93 Federal St., Boston, Mass.; cost about \$120,000. (Lately noted.)

Tex., Waco.—C. L. Johnson & Son awarded contract to J. S. Harrison and R. M. Ligon, Waco, to erect office and warehouse building; 30x160 feet; two stories and basement; mill construction; hot-air furnace; hand elevator; vulcanite roofing over warehouse and tile over office; cost \$12,500; plans by Roy E. Lane of Waco; also will erect lumber sheds adjoining warehouse; to contain 42,000 square feet floor space. (Recently noted.)

16 miles, in addition to its long-contemplated extension in the other direction from Mechanicsville, Md., to Esperanza, Md., about 24 miles. Henry W. Watson, Franklin Bank Bldg., Philadelphia, Pa., is president.

Md., Myersville.—The Frederick Railroad Co. is reconstructing its yards at Myersville with six tracks of 40 cars total capacity. Permanent surveys are about to be made for the proposed extension from Jefferson to Brunswick, Md., 7½ miles. O. B. Coblenz, Frederick, Md., is chief engineer.

Mo., Bismarck.—Hamilton-Ryan Construction Co., 413 Benoit Bldg., St. Louis, says a report quoting an official, has begun construction of the Bismarck, Bellevue & Western Railway from Bismarck westward to Sunlight, and thence southward to Bunker, Mo., altogether 53 miles. Heavy rock work on about 20 miles; also a number of culverts and several steel bridges from 150 to 300 feet long; trestles 25 to 40 feet. E. E. Evans, Bismarck, Mo., is president.

Miss., Lyman.—The Ingram-Day Lumber Co. of Lyman, it is reported, will build a railroad from its plant to Bayou Bernard, near North Gulfport.

Miss., Monroe.—The Homochitto Lumber Co., says a report, will build a branch railroad from Eddleton to reach timber lands.

Mo., Springfield.—M. C. Byers, Springfield, chief engineer of the Frisco system, is reported to have completed plans for three bridges to cost about \$1,000,000. About 1,000 tons of steel will be required. They are to be over the Arkansas River at Van Buren, Ark., and Tulsa, Okla., respectively, and the Red River at Arthur City, Tex. There will be a smaller bridge over the Verdigris River at Afton, Okla., and over Frog Bayou at Mountainburg, Ark. T. J. Powell, St. Louis, has invited bids for the steel. Very few changes will be made in masonry. Erection will be done by the company's forces.

Mo., St. Louis.—The Railway Securities & Construction Co., capital \$50,000, has been chartered in Delaware with the following incorporators: F. Armstrong, W. Mayne and R. J. Kirkwood of St. Louis.

N. C., Boone.—There have been three miles of track laid and nine miles of grading done on the Yadkin River (or Watauga) Railway under construction between Boone and North Wilkesboro, 52 miles. Points on route, Cook's Gap, Watauga, Middlecane, Darby, Denny, Elkville, Gould's, Marley Ford, Goshen and Minton. There is also being built a 20-mile branch from near Elkville via Grandin, King's Creek, Hornel and Hibernia to Lenoir, connecting with the Carolina & Northwestern. Maximum grade 2½ per cent.; maximum curvature 8 degrees. W. J. Grandin of Lenoir, N. C., and Tidoute, Pa., is president, and H. C. Landon of North Wilkesboro, N. C., is chief engineer.

N. C., Charlotte.—J. T. Platt (permanent address Greensboro, N. C.) has taken a subcontract for about 6,000 cubic yards of grading on the Norfolk Southern extension from Mt. Gilead to Charlotte, 16 miles southeast of Charlotte, working under the name of Platt & Graham.

N. C., Sanford.—The Atlantic & Western Railway is reported to have laid track as far as Summerville on its extension to Lillington, to be completed next month. W. J. Edwards is president. The latter says that the maximum grade is 1.3 per cent, and the maximum curve 4 degrees.

N. C., Statesville.—Grading of the Statesville Air Line is reported complete to the South Yadkin River, 10 miles, and within a mile of Turnersburg. Construction is being continued. W. D. Turner is president, Wm. Wallace vice-president, P. C. Carlton secretary, and D. M. Ausley treasurer and general manager.

Okla., Lawton.—R. L. Robertson is reported to have succeeded J. L. Hamon as president of the Ardmore, Duncan & Lawton Railway Co., and construction is expected to soon begin. Mr. Robertson has been vice-president.

Okla., Ponca City.—The Interstate Interurban Railway Co., of which O. L. Brown, Arkansas City, Kans., is reported president, will, it is said, be ready to let contracts for construction by December 15 for its proposed electric line from there to Ponca City, about 50 miles, preliminary arrangements being completed.

S. C., Charleston.—James Sottile, president and general manager, says that the Charleston & Isle of Palms Traction Co. will build from 36 to 60 miles of railway from Mt. Pleasant, near Charleston, to McClellanville, S. C.; route level. Albert Sottile is vice-president and treasurer; Santo Sottile, secretary, and W. W. Fuller, chief engineer.

S. C., Columbia.—Revised preliminary sur-

vey is reported in progress for the Carolina & Georgia Railway from Columbia to Aiken, S. C., about 60 miles, and it is expected that the company will be ready to let contracts within a month or two. G. E. Shand, Columbia, S. C., is chief engineer.

S. C., Orangeburg.—W. C. Wolfe of Orangeburg is quoted saying that the Orangeburg Railway, 17 miles long from Orangeburg to North, on the Seaboard Air Line, has been graded, and there are four miles of track laid out of Orangeburg; also that it is expected to have the line in operation within three months.

Tenn., Henry.—Reported that the Louisville & Nashville Railroad will build a branch from Henry 1½ miles to the clay mines of Stroup & Breddove. J. H. Clark is manager of the mines. W. H. Courtenay is chief engineer of the railroad at Louisville, Ky.

Tex., Brownwood.—The Gulf, Colorado & Santa Fe Railway has authorized construction at Brownwood thus: Six-track freight yard of 50 cars capacity for each track, with tail tracks, cross-overs and subways at Austin and Vine Sts.; also engine, coach and repair yard. Estimated cost respectively \$250,000 and \$169,000; total \$419,000. F. Merritt, Galveston, Tex., is chief engineer.

Tex., Dallas.—J. W. Crotty of Dallas, vice-president and general manager of the Eastern Texas Traction Co., is quoted saying that construction will begin immediately at Garland, Tex., on the interurban electric railway from Dallas to Greenville, Tex., 54 miles. Forest E. White of Galveston is president; W. A. Williams and J. F. Nichols of Greenville are also vice-presidents; L. E. Birdsong of the same place, treasurer; I. A. Miller, secretary, and J. L. Coughran, assistant secretary, both of Dallas; Wm. A. Obenchain, Jr., is chief engineer, and L. C. Davis, engineer for the syndicate back of the plan.

Tex., Gainesville.—J. W. Billingsley of Houston, Tex., and W. M. Waskow of Dallas, Tex., civil engineers, are reported investigating the grading and right of way of the old Gainesville, Whitesboro & Sherman Interurban railway on behalf of the Republic Trust Co. of Dallas, C. L. Wakefield, president, which may take over and complete the road.

Tex., Giddings.—The greater part of the grade on the Houston & Texas Central Railroad's cut-off from Giddings to Stone City is reported finished; it will be about 37 miles long.

Tex., Johnson City.—George Harwood, secretary of the Citizens' League of Johnson City, and others are reported working on plans for the construction of a railroad from Austin via Johnson City to Fredericksburg, Tex., about 70 miles.

Tex., Orange.—Ed Kennedy of Houston, president of the Orange & Northeastern Railway, is quoted saying that construction will begin at Vinton, La., and the grading contract will be let within 20 days.

W. Va., Fairmont.—The Buckhannon & Northern Railway is reported to have practically completed its track all the way from Rivesville, near Fairmont, to the Pennsylvania boundary, about 32 miles, and is expected to begin operating trains November 15. S. D. Brady, Fairmont, is chief engineer.

W. Va., Hendricks.—The Black Fork Railroad Co. of Hendricks, W. Va., has been incorporated to build a line from Hendricks to Rowlesburg, W. Va., about 25 miles; incorporators, R. B. Horsburg, D. C. Wilson, E. M. Bechtel, A. J. Armstrong and L. R. Harvey of Hendricks, W. Va.

W. Va., New Martinsville.—The New York capitalists who have taken over the Clarksburg Northern Railroad contemplate making it 40 or 50 miles longer than was planned by the former owners. Location of route not yet decided. H. M. Fry is chief engineer. (See Manufacturers Record October 17.)

W. Va., Pickens.—The Pickens & Webster Springs Railroad Co. of Grafton, W. Va., has been incorporated with authorized capital \$50,000 to build a line from Pickens to Webster Springs, about 20 miles; incorporators, John T. McGraw, George L. Abbott, George A. Hardman of Grafton, Howard W. Showalter of Fairmont and John J. Johnson and James Pickens of Pickens, W. Va.

STREET RAILWAYS

Ala., Birmingham.—The Birmingham Railway, Light & Power Co. has been granted a franchise to extend its line through Brighton to the furnaces of the Woodward Iron Co., and it may be continued to the ore mines at Dolomite. A. H. Ford is president and general manager.

Ala., Birmingham.—J. H. McCary, W. P. G. Harding, John J. Keyser and associates

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—The Queen & Crescent Route, according to a report quoting T. C. Powell, vice-president, will spend about \$77,000 to improve facilities in Birmingham. Of this, about \$62,000 is for additional yards on the Mary Pratt furnace site between First Ave. and the railroad tracks and Sloss furnace and Avondale. About \$15,000 will be for better team track facilities between 18th and 20th Sts. The latter is already begun. Curtis Dougherty, Cincinnati, O., is chief engineer.

Ala., Brent.—Survey is reported begun at Helberger for an extension of the Suttles & Weaver Lumber Co.'s railroad to Marion, about 10 miles. About 10 miles of track are reported complete from the mills at Brent to a point within six miles of Helberger. Line will be 26 or 27 miles long. C. L. Greer of Marion is quoted saying that the railroad (Incorporated as the Birmingham, Selma & Pensacola) has been bought by business men of Marion, and that the extension of 14 miles will be constructed by them.

Ala., Gadsden.—Reported that the Gadsden, Bellevue & Lookout Mountain Railway will be completed by November 12. About 300 feet of grade is finished daily, and tracklaying will soon start on the 3¼-mile line. U. J. Virgin, 838 Canal St., New Orleans, is president; Louis A. Hoffman, 117 John St., New York, vice-president; W. M. Granger, secretary and treasurer; Loui Hart, manager and purchasing agent, and A. J. Grefenkamp, chief engineer, all of Gadsden, Ala.

Ark., Stuttgart.—Gordon N. Peay, Little Rock, receiver for the Stuttgart & Rice Belt Railway, says that it will not be extended by him. It was reported that the line would be built on to Pine Bluff, about 35 miles.

Fla., Daytona.—Charter is granted to the Florida Central Railroad Co. of Daytona; capital \$250,000. Michael Scheltz is president; James K. Atkinson, secretary.

Fla., Jacksonville.—Charter is granted to the Florida Interurban Railway & Tunnel Co., capital \$2,000,000, which proposes to tunnel the St. John's River and construct an electric railway to St. Augustine via Pablo Beach, 45 miles, as heretofore reported. M. W. Bates of Jacksonville is president. (See Manufacturers Record September 26.)

Ga., Carrollton.—H. G. Lowry of Carrollton is reported planning the construction of an electric interurban railway from Carrollton to Atlanta, Ga., about 50 miles, under the name of the Atlanta-Carrollton Railway, Light & Power Co.

Ga., McIntosh.—Charter is granted to the Flemington, Hinesville & Western Railroad Co., which has just completed its line to Hinesville, five miles, and proposes to extend 20 miles farther to Glenville, Ga. Capital, \$25,000. Incorporators, J. R. Ryan, T. S. Layton, J. B. Fraser, R. Syd Mendry, J. R. Eagle, C. E. Ashmore, E. H. Caswell, D. A. Fraser and S. B. Brewton, all of Hinesville, Ga. J. B. Way is president and E. C. Miller vice-president.

Ky., Louisville.—The Baltimore & Ohio Railroad Co. is reported surveying in the valley of the Big Sandy River near Louisa for a contemplated extension of its line from or near Huntington, W. Va., to connect with its Sandy Valley & Elkhorn Railway at or near Shelby, Ky. F. L. Stuart, Baltimore, Md., is chief engineer.

Md., Brandywine.—The Washington, Potomac & Chesapeake Railway Co., it is reported, contemplates construction of an extension northwest to Washington, D. C., about

are asking for a franchise for a street railway on Avenue F from 20th St. to the Monteville Rd. and beyond, the line to be constructed by the Birmingham Railway, Light & Power Co.

Ala., Huntsville.—The Huntsville Railway & Light Co., recently taken over by the Interstate Power & Light Development Co., is reported planning the completion of its railway to Monte Sano.

Fla., Daytona.—Chartered: Daytona Public Service Co., with \$300,000 capital stock; possibly includes street railway. F. N. Conrad, president, and T. E. Fitzgerald, secretary and treasurer.

Fla., Miami.—Dr. W. S. Burkhardt of Cincinnati, O., who has lands near Miami, and Guy D. Malon, also of Cincinnati, are reported considering plans for the construction of an electric interurban railway, with street-car line in Miami.

Mo., St. Louis.—The Western Power & Light Co. is reported incorporated to build electric railways and other public utilities in St. Louis; capital stock \$300; incorporators, Fred. R. Mott and Leo C. Driatzko of Webster Groves, Mo., and C. E. Goltzmann of St. Louis.

Tenn., Memphis.—The Memphis Street Railway Co. It is stated, will begin work before winter on the construction of an extension to Riverside Park.

Tex., Houston.—The increase of the capital stock of the Houston Electric Co. has been approved by the State, thus giving the company \$1,000,000 instead of \$2,000,000. At least

part of the proceeds of the additional stock are to be used for improvements. David Lalay is manager.

Tex., Dallas.—Permission has been granted the Metropolitan Street Railway Co., or North Belt Line, to double track its road on Haskell Ave. between Munger Ave. and State St.

Tex., Houston.—David Daly, manager Houston Electric Co., is quoted saying that plans are complete to make an extension on Main St. southward to Lamar or Dallas Ave. and to double-track the Louisiana St. line, the improvements to cost from \$100,000 to \$150,000.

W. Va., Charleston.—Franchise to enter the city is granted by a Council ordinance to the Charleston-Dunbar Traction Co., of which Fred Paul Grosscup is president. The ordinance must now be approved by the Board of Affairs.

W. Va., Huntington.—C. L. S. Tingley, second vice-president American Railways Co., Witherspoon Bldg., Philadelphia, says that it is proposed to further extend the double-tracking of the Huntington Street Railway, but the work will be done by the company's forces. About \$300,000 has been thus far spent for such work, including enlargement of power facilities. Recent press report about \$1,000,000 to be spent is exaggerated.

W. Va., Martinsburg.—It is reported that survey for the proposed Martinsburg Street Railway will begin immediately. Engineers' headquarters in the People's Trust Building.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Bakery Equipment.—Thompson Grocery Co., 115 E. Lafayette St., Jackson, Tenn., wants addresses of manufacturers of equipment and fixtures for bakery.

Barrels and Crates.—Fruit and Truck Growers' Agency, G. S. Clapp, secretary, San Benito, Tex., wants prices on barrels and crates.

Barium Sulphate.—Chas. B. Fife Company, 624 Central National Bank Bldg., St. Louis, Mo., wants barium sulphate in quantities.

Brick.—Commissioners of Public Works, Tampa Bay Casino, Tampa, Fla., receive bids until 2 P. M. November 5 for hauling and delivery of 5,000,000 paving brick on streets to be designated therefor by board; bidder to furnish sufficient wagons and teams to handle and haul minimum of 4,000 brick per day between hours of 6.30 A. M. and 5.30 P. M., at uniform rate or number of brick per hour (Sundays and holidays excepted); bids to be received on basis of mile haul over most direct paved streets, and for every half mile, or fraction thereof, over one mile; also to bid on flat rate for hauling brick on any streets in city designated by board; certified check \$500; D. B. McKay, chairman.

Bridge Construction.—Talbot County Commissioners receive bids until noon November 12 at Easton, Md., for constructing 1000-foot concrete bridge across Miles River between Easton and Unionville, Md.; certified check for \$300; plans on view and forms of specifications and contract obtainable at office of State Roads Commission, Baltimore, Md.; Joseph B. Harrington, clerk of Talbot County.

Bridge Construction.—Bids received at office of clerk, Isle of Wight county, Isle of Wight, Va., until November 6 for constructing bridge across Jones' Creek; 215 feet long; certified check for \$250; further information furnished on application to P. St. J. Wilson, State Highway Commissioner, Richmond, Va.

Building Material.—P. O. Randall, 512 4th St., Birmingham, Ala., wants prices on interior finishing of selected red birch for residence; to be gotten out by plans and details.

Building Materials.—H. J. Montgomery, 368 N. St. N. W., Washington, D. C., will receive sub-bids on National Training School for Girls, Washington, D. C., including brick, reinforced concrete, slate roof, terra-cotta, copper, mill work, structural and ornamental iron.

Bulkhead, etc.—J. S. Engineer Office, Galveston, Tex. Proposals for dredging

channel and building bulkhead near Port O'Connor, Tex., received until noon November 12, then opened. Information on application. C. S. Riehl, Lieutenant-Colonel, Engineers.

Can-filling Machine.—Dryola Ventering Co., Charlotte, N. C., wants machine for filling large and small oil cans.

Cars.—See "Electric Railway Equipment." **Coal Hoppers.**—Southern Timber Co., W. A. Lendave, manager, Crewe, Va., wants 50 drop-bottom coal hoppers of 50 tons capacity.

Concrete.—See "Machinery, etc."

Cottonseed Oil.—See "Machinery, etc."

Crane.—Proposals for locomotive crane received at Bureau of Yards and Docks, Navy Department, Washington, until 11 A. M. November 2, then opened, for 15-ton locomotive crane at Naval Station, Pearl Harbor, Hawaii. Specifications obtainable upon application to Bureau of Yards and Docks. H. R. Stanford, Chief of Bureau.

Cranes.—Proposals for floating cranes of revolving type, 250 tons capacity, received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. January 13, then opened in public. Bids and general information relating to this circular (No. 743) may be obtained from this office or offices of Assistant Purchasing Agents, 21 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from United States Engineer Offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.; F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Crushing Machinery.—Bromide Oolitic Stone Co., Bromide, Okla., wants second-hand (20 to 25 cars per daily capacity) gyratory crusher with screens, etc.

Curbing.—Commissioners of Public Works, D. B. McKay, chairman, Tampa Bay Casino, Tampa, Fla., receive bids until 2 P. M. November 5 for delivery of 100,000 linear feet of granite curbing on streets designated by board; bids to be received on basis of mile haul over most direct paved streets, and for every one-half mile, or fraction thereof, over one mile; also to bid on flat rate for hauling curbing on any streets in city designated by board; certified check \$500.

Distilling (Turpentine) Machinery.—D. D. Armstrong, Georgian Terrace Hotel, Atlanta, Ga., wants turpentine distillery machinery; retort distribution or other method considered.

Ditching Machine.—F. S. Smedley, McAlester, Okla., wants prices on ditching machine.

Ditch Excavation.—Moorehead Drainage District, Moorehead, Miss., will let contract November 12 for about 600,000 yards ditch excavation; work to be let in three contracts, Nos. 1, 2 and 3, of 250,000, 150,000 and 200,000 yards, respectively; plans and specifications on file with attorneys at Moorehead, at Chancery Clerk's office, Indianola, Miss., and Engineering & Contracting Co., Chicago, Ill.; full information obtainable from Southern Engineering Co., Clarksdale, Miss.

Drykiln.—Colhoun, Tallant & Co., Christiansburg, Va., want information relative to purchasing hot-air drykiln for white pine.

Electric Lamps.—Glover Machine Works, Marietta, Ga., wants 80 and 100-candle-power incandescent electric lamps for 220 volts, direct current.

Electric Plant.—P. O. Box 81, Mobile, Ala., wants estimates on installation of electrical power plant.

Electric-Light Plant.—City of Fredericktown, Mo., receives bids until November 6 for construction of electric-light plant; plans and specifications with City Clerk, or obtainable from engineer, Fuller-Coulter Company, Chemical Bldg., St. Louis, Mo., on payment of \$2.50.

Electrical Machinery.—See "Machinery, etc."

Electrical Machinery.—Emory & Eschmeyer, 2 S. 15th St., Philadelphia, Pa., want direct-connected electric generator of 250 K. V. A. capacity, 3300 volts, three phase, 60 cycles, alternating current.

Electric Railway Equipment.—Charleston & Isle of Palms Traction Co. wants prices on trolley cars, power-house equipment and other electrical machinery. Address James Sottile, president, Charleston Hotel, Charleston, S. C.

Electric Wiring, etc.—Treasury Department, Office of Supervising Architect, Washington, D. C. Proposals received until 3 P. M. November 6 for conduit and wiring system, gaspiping and lighting fixtures in United States custom-house, etc., Savannah, Ga., in accordance with drawings and specifications, copies of which may be had at above office or at office of custodian, Savannah, Ga., at discretion of the supervising architect, O. Wenderoth.

Elevator.—Treasury Department, Office of Supervising Architect, Oscar Wenderoth, Washington, D. C. Proposals received until 3 P. M. November 23, then opened, for installation complete of electric passenger elevator in United States postoffice and court-house, Washington, N. C.; drawings and specifications obtainable from superintendent of construction at discretion of supervising architect.

Engines.—See "Machinery, etc."

Engine.—O. S. Corle, Fishertown, Pa., wants prices on (for immediate purchase) hand stationary or portable steam engine; 12 to 20 horse-power; state specific offer and guarantee.

Engines.—Willis Todd, 4915 Chicago St., Omaha, Neb., wants addresses of manufacturers of oil engines; to be used for irrigation work in Texas.

Excavating Machinery.—O'Connor Construction Co., Maryville, Tenn., wants prices on drag-line excavator.

Excelsior Machinery.—C. H. Brown, Cornelia, Ga., wants information on manufacture and sale of excelsior and prices on machinery.

Felt.—See "Paper, etc."

Fire Extinguishers.—G. M. Macdonough, Lakeland, Fla., wants to correspond with manufacturers of fire extinguishers.

Fuel-oil Equipment.—A. N. Bentley, Atlanta, Ga., manager Electric Storage Co., 1126 Candler Bldg., Atlanta, Ga., wants to correspond with manufacturers of fuel-oil equipment for kerosene and heavier oils for stationary vertical boiler.

Grading.—L. E. Faulkner, division engineer Mississippi Central Railway, Hattiesburg, Miss., receives bids for 8000 cubic yards grading on railroad two miles west of Sumrall; work to be completed by December 10.

Hardware.—Machinery & Hardware Co., W. R. Powell, president, Wake Forest, N. C., wants information relative to agency for hardware in several counties in North Carolina.

Heating Plant.—H. J. Montgomery, 368 N. St. N. W., Washington, D. C., will receive sub-bids on heating plant for National Training School for Girls, Washington, D. C.

Heating Plant.—A. J. Taussig, 313 Fullerton Bldg., St. Louis, Mo., wants information relative to gas-fired boiler plant for heating \$20,000 residence.

Ice Plants.—See "Machinery, etc."

Incinerating Plant.—William Elmore Seal, 141 Broadway, New York, wants addresses of firms manufacturing incinerating plants for cities and towns.

Levee Construction.—Executive Department, Luther E. Hall, Governor, Baton Rouge, La., receives bids at Board of State Engineers, 213 New Orleans Court Bldg., New Orleans, La., until noon November 2 for constructing Rapp levee, Plaquemines parish, left bank, 16,000 cubic yards; deposit \$115; Bulot levee, Plaquemines parish, right bank, 4500 cubic yards; deposit \$50; Taylor levee, Plaquemines parish, 4500 cubic yards; deposit \$50.

Levee Construction.—Board of Commissioners, Atchafalaya Basin levee district, V. M. Lefebvre, president, receives bids until November 7 at Board of State Engineers, 213 New Orleans Court Bldg., New Orleans, La., for constructing following levee work on right bank of Mississippi River, Pointe Coupee parish, enlargement: Innis levee, 29,000 cubic yards, deposit \$150; Morganza levee, 100,000 cubic yards, deposit \$350; Grand to Morrison levee, 164,000 cubic yards, deposit \$490; Fannie Ritchie levee, 35,000 cubic yards, deposit \$170; West Baton Rouge parish, Belle Vale levee, 100,000 cubic yards, deposit \$325; Iberville parish, Plaquemine City levee, 25,000 cubic yards; Ascension parish, Germania levee, 170,000 cubic yards, deposit \$500.

Locomotive.—John G. Duncan Company, 308 W. Jackson Ave., Knoxville, Tenn., wants dealers' prices (for immediate delivery) on standard-gauge Shear locomotive; second-hand preferred.

Machinery.—Machinery & Hardware Co., W. R. Powell, president, Wake Forest, N. C., wants information relative to agency for machinery in several counties in North Carolina.

Machinery, etc.—Joseph Ouassani, 217 W. 10th St., between Seventh and Eighth Aves., New York, wants to correspond (view to representation in Cairo, Egypt) with manufacturers of concrete, concrete machinery and mixers, kerosene and gasoline engines, electric-light and generating plants, ice plants and machinery, wire fence and poultry netting, pumps and pumping machinery, well-drilling machinery, cotton goods, gasoline trucks, cottonseed oil and oil-mill machinery.

Manufactured Products.—Renganadham & Co., Karaludul, India, want catalogues, prices, etc., from manufacturers relative to agency for manufactured products; now deal in semi-rotary pump, colonial lift pump, rotary pump, steam horse, Bullock and hand-power pumps, wrought iron and galvanized tubes and pipe fittings, steel girders, angles and tees, engineering tools, cement, cement tiles, corrugated and plain zinc sheets, antigraptogormic powder and other building materials, well borers and Abyssinian tube well sinkers.

Mechanical Draft Apparatus.—Office Sewerage and Water Board, fifth floor City Hall Annex, New Orleans, La. Proposals received by Sewerage and Water Board until noon December 20 for furnishing and erecting mechanical draft apparatus; specifications, with blank form of proposal, obtainable upon application at office of board; F. S. Shields, secretary; Geo. G. Earl, general superintendent.

Metal Numbers.—J. M. Farr, 14 N. Jackson St., Mobile, Ala., wants addresses of manufacturers of metal numbers in different sizes for numbering houses.

Molds.—Ezeride Filler Co., Rufin R. Barrow, president, 1521 Canal St., New Orleans, La., wants addresses of manufacturers of molds for printing rolls similar to those used by printers on printing presses.

Naval Supplies.—Proposals opened at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., November 26 to furnish naval supplies as follows: Delivered Washington, schedule 4935, ball bearings, creosote wood paving blocks, fire-brick, steam traps, locomotive reducing valves, naval rod bronze, sheet brass, round, half-drawn rod copper, cold-rolled or cold-drawn steel; schedule 4936, drills, files and hammers, drawn brass bars, naval rod bars; schedule 4937, reversible and non-reversible drills, boring, drilling and mill machines, motor-driven planer; also for delivery Norfolk, Va., schedule 4941, machinists' taps; bids also opened December 23 for metal furniture, delivered Norfolk, schedule 4936; schedules 4936

tained on application to navy pay office nearest each navy-yard.

Oil-mill Machinery.—Boston Oil & Guano Co., O. P. Walton, manager, Boston, Ga., wants 15-hp Smith-Vaile press for cottonseed-oil mill; use second-hand if in good order.

Oil-refining Equipment, etc.—W. E. Hudman, Drawer 55, Waco, Tex., wants prices on equipment for cotton-oil refinery, compounding plant and soap factory, including tanks, yard machinery, soap kettles, etc.

Paper, etc.—High Point Hardware Co., High Point, N. C., wants prices from manufacturers on wrapping paper; also other paper, and felt and glass backing such as used by furniture makers; view to agency.

Paper-washing Machinery.—Richard Mittler, 1 Wiesingerstrasse 6, Vienna, Austria, is interested in machines for washing paper notes (money); wants to correspond with manufacturers; view to representation.

Paving.—Shelby County Commissioners, H. M. McKay, chairman, Courthouse, Memphis, Tenn., receives bids until 10 A. M. November 4 for scarifying, rounding up and applying asphaltum pavement on Central Ave. from Parkway east to Goodwyn Ave., and on Goodwyn Ave. south to Southern Railroad, approximately two miles; plans and specifications on file in commissioners' office; certified check \$500.

Paving.—Bids, addressed to Board of Awards, care of City Register, received at his office, City Hall, Baltimore, Md., until 11 A. M. November 6 to grade, curb and pave with vitrified blocks under Contract No. 14: 29th St., from Huntingdon Ave. to Hampden Ave., 1600 square yards; grade, curb and pave following named streets with bituminous concrete under Contract No. 15: Second Ave., from Elm to Chestnut Ave.; 28th St., from Huntingdon Ave. to Hampden Ave.; 27th St., from Calvert to Guilford Ave.; 26th St., from Calvert St. to Guilford Ave.; Hampden Ave., from 27th St. to 29th St.; Oak St., from 23th to 27th St.; Chester St., from North Ave. to Clifton Park, and Malakoff St., from Chester to Washington St.; 14,000 square yards; specifications obtainable at office Commissioners for Opening Streets, City Hall, where plans and profiles are on file for information of bidders; deposit of \$5 required for each set of specifications covering contract; Eugene E. Grannan, president, Commissioners for Opening Streets.

Paving.—Street committee (John J. Price and others), Frostburg, Md., receives bids at office of City Clerk until 2 P. M. November 4 to grade and pave 600 feet of First Alley and 200 feet of Lucas or Pressman Alley; plans and specifications on file with William Harvey, City Engineer; bids to be made on blank forms furnished by engineer; certified check \$50.

Paving.—Commissioners for Street Improvement District No. 212, A. N. De Mers, chairman, 1120 State Bank Bldg., Little Rock, Ark., receives bids until 2 P. M. November 7 to pave those portions of West 7th, High and Battery Sts. included in said district; plans and specifications on file with E. A. Kingsley, engineer, Markham and Center Sts., Little Rock; material samples to be filed with engineer in charge; certified check \$1000.

Paving.—City Council, Ocala, Fla., will consider bids December 3 for paving with vitrified brick portion of Fort King Ave.; about 1636 square yards; also portion of South, or Exposition St.; about 2300 square yards; in accordance with specifications now on file at office of H. C. Sistrunk, City Clerk; J. D. Robertson, Mayor.

Piping.—A. J. Twigg & Son, 205 Terminal Bldg., Augusta, Ga., want prices on 6000 feet three and four-inch black pipe.

Piping, Plugs, etc.—War Department, office of chief signal officer, R. J. Burt, Captain, Disbursing Officer, Washington, D. C., receives bids until November 13 for 100 cast-iron pipe Ts reducing on outlet 2 3/4 inches; 150 pipe plugs with square nut 2 inches; 150 boiler-plate manhole covers, drawings 7691; 450 sewer flush pipes with cast-iron covers, commercial standard article similar to that shown on Signal Corps drawing 789-F.

Pump.—O. R. Whitney, 39 Cortlandt St., New York, wants belt-driven power pump; to deliver 800 to 1000 gallons water per minute, 12-inch suction, 10-inch discharge, to pump against 160 feet elevation; pump to be boxed for export. Send particulars and price first mail.

Pumps.—See "Machinery, etc."

Pumps.—Willis Todd, 4915, Chicago, Ill., wants addresses of manufacturers of centrifugal pumps; to be used for irrigation work in Texas.

Refrigerating Equipment.—Thompson Grocery Co., 115 E. Lafayette St., Jackson, Tenn., wants addresses of manufacturers of small refrigerating plant and fixtures for meat market in grocery.

Refrigerating Machinery.—Union Ice & Fuel Co. (R. A. Easterling and others), Union, S. C., wants complete refrigerating machinery set up for operation on foundation for 15-ton ice plant, including boilers, compressors, tanks, pumps, piping, cooling tower; guarantees must be furnished with each proposal stating cost of manufacture per ton of ice with coal at \$3.30 per ton; guarantee must also cover guaranteed daily production under normal conditions.

Road Construction.—Perry County Commissioners, Marion, Ala., receives bids until 2 P. M. November 11 to grade, drain and surface with sand-clay four miles of Fikes Ferry Rd.; expenditure \$8000; certified check \$400; also until 2 P. M. November 25 to grade about four miles of Tuscaloosa Rd.; expenditure \$8900; certified check \$400; profile and specifications may be obtained from George C. Scales, County Engineer.

Road Construction.—Bids received at clerk's office, Lawrenceville, Va., until noon November 12 for construction of 83.4 miles of gravel or soil roads in Totaro and Powellton districts, Brunswick county; certified check for \$350 to accompany each bid on one road and for \$500 on two or more roads; plans and specifications on file at clerk's office,

Safe, etc.—Commonwealth Trust Co., Little Rock, Ark., wants prices on safe, vault and other bank fixtures.

Septic Tank.—John J. Phoenix, carp of Proximity Mercantile Co., Greensboro, N. C., wants prices on septic tank for Masonic and Eastern Star Home.

Sewer Construction.—Dan C. Smith, City Comptroller and Secretary, City Hall, Houston, Tex., receives bids until November 25 to construct sanitary sewers in Fifth ward; 22,720 linear feet of 8-inch, 2500 linear feet of 10-inch, 3000 linear feet of 12-inch and 8500 linear feet of 24-inch sewer pipe; pipe to be used may be as follows: All vitrified pipe, Meriwether lock-joint reinforced concrete pipe for 24-inch size only, or Thomas cement glazed sewer pipe. Specifications and plans, bidding blank and form of contract can be obtained at office of F. L. Dormant, City Hall, Houston; certified check \$3500; H. B. Rice, Mayor.

Sewer Construction.—Brice Frazier, City Clerk, San Benito, Tex., receives bids until 8 P. M. November 13 (to be opened at 8 P. M. November 18) for construction of sanitary sewers; 17,450 linear feet 8-inch pipe, 0-10-foot cut; 10,250 linear feet 10-inch pipe, 0-14-foot cut; 3375 linear feet 12-inch pipe, 0-14-foot cut; 2275 linear feet 15-inch pipe, 0-14-foot cut; 1450 linear feet 18-inch pipe, 0-14-foot cut; 106 manholes, 0-14-foot depth; 2 disposal plants; certified check \$1000; plans and specifications may be had

disposal plant; certified check for \$2000; plans and specifications may be seen at office of City Clerk and at office of H. S. Jaudon Engineering Co., engineer, Box 582, Savannah, Ga.; specifications will be furnished on payment of \$5.

Sewers.—City of West Palm Beach, Fla., will open bids December 3 (extended date) for laying 22,000 feet concrete sewer pipe, with manholes and septic tank; specifications on file with A. M. Lopez, clerk.

Soap Machinery.—See "Oil-refining Equipment, etc."

Steamship Line.—Antoine D. Charisiades, Boite Postale No. 1218, Alexandria, Egypt, wants correspondence with American steamship line; view to agency in connection with extension of line to Alexandria.

Steam Shovel.—Eastern Railway Supply Co., 413 American Bldg., Baltimore, Md., wants on No. 1 and one No. 2 Thew steam shovels.

Store Fixtures.—Thompson Grocery Co., 115 E. Lafayette St., Jackson, Tenn., wants addresses of manufacturers of fixtures for meat market, grocery, bakery, etc.

Sulphate.—See "Barium Sulphate."

Telephone Equipment.—War Department, office of chief signal officer, Capt. R. J. Burt, Disbursing Officer, Washington, D. C., receives bids until November 15 for large and miscellaneous lot of telephone equipment. Send for specifications.

Textiles.—See "Machinery, etc."

Water Meter and Well Drilling.—Renganadham & Co., Karaikudi, India, desire information, etc., relative to instrument for determining underground water current and at what depth.

Waterproof (Cloth or Paper) Material.—W. W. Stevens, Mayfield, Ga., wants waterproof cloth or paper for covering lumber, fertilizer, etc.

Water-works.—John S. Gibson, Hoxie, Ark., wants prices on isolated water-works; also pumps, air pressure water supply and motors for pumping.

Well-drilling Equipment.—See "Machinery, etc."

Woodworking Machinery.—L. H. Stoneman, Columbia, Va., wants addresses of manufacturers of machinery for making shuttle blocks; also wants to correspond with buyers of shuttle blocks.

PLANNING FOR DRAINAGE.

Co-operative Work in Texas for Land Reclamation.

[Special Cor. Manufacturers Record.]

Beaumont, Tex., October 14.

Texas has approximately 3,000,000 acres of wet and overflow lands, and in addition to this there is quite a large acreage which is too wet for cultivation a part of the year. This large district is practically all in 14 counties on or near the Gulf coast, extending from Corpus Christi, on the south, to Orange, on the northeast.

To reclaim this land the National Department of Agriculture has established a temporary drainage investigation office here in Beaumont. H. A. Klipp, an expert drainage engineer, is in charge. Through an appropriation of \$7000 made by the Government and a like amount raised by Jefferson county this office and its work were made possible. Since last April, when the office was established, a corps of engineers under Mr. Klipp have been busy making surveys of this county. To date some 1800 miles in lines have been traversed by the engineers, and it is hoped that this entire county will be fully surveyed by the first of the year. Then by April the plans will be ready and several of the drainage districts now organized in the county can begin actual construction of the ditches, canals, etc.

The temporary office here was established merely to help place drainage throughout this Gulf coast country on a scientific basis. Heretofore drainage districts have been determined by property lines or the number of landowners desiring to have their lands reclaimed, and not according to the natural divisions by watersheds. The mission of the Government engineers is to set the interested and

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Lawrenceville, and at office of P. St. J. Wilson, State Highway Commissioner, Richmond, Va.

Road Construction.—State Roads Commission, O. E. Weller, chairman, 534 N. Howard St., Baltimore, Md., receives bids until noon November 12 to macadamize two sections of State highway, aggregating 4.26 miles, as follows: Dorchester county, from Vienna to Big Mill, 1.44 miles; Worcester county, from Pocumoke toward Snow Hill, 3.26 miles; bids to be made on blank form contained in book of specifications furnished by Commission upon application and payment of \$2 for each section; blueprints of each section furnished at rate of 25 cents for each half mile; certified check, \$500.

Road Construction.—Talbot County Commissioners, Easton, Md., receive bids until noon November 12 to construct section of State-aid highway on Miles River Rd. between Miles River and Unionville, 1.06 miles; bids to be made on blank forms furnished by State Highway Commission, 534 N. Howard St., Baltimore, Md.; certified check, \$200; plans can be seen and forms of specification and contract obtained from State Roads Commission at its Baltimore office; Joseph B. Harrington, County Clerk.

Road Construction.—Pasco County Commissioners will open bids November 12 at San Antonio, Fla., to construct one mile of sand and clay road; Allan Pearce, engineer in charge.

Rubber Tires, etc.—Richard Mittler, 1 Wiesingerstrasse 6, Vienna, Austria, wants to correspond with manufacturers of rubber goods, especially pneumatic and solid rubber tires for cars; view to representation.

by payment of \$5; J. M. Breen, Mayor; Bruce Gentry, City Engineer.

Sewer Construction.—Bids, addressed to Board of Awards, Baltimore, Md., received at office of City Register, City Hall, until 11 A. M. November 6 for constructing sanitary lateral sewers in district No. 40-A, as shown on plans on file in office of Calvin W. Hendrick, chief engineer, Sewerage Commission; specifications and plans obtainable upon application at office of secretary of Sewerage Commission, Room 504, American Bldg.; charge of \$10 made for each set of specifications and blueprints; approximate quantities, 26,000 linear feet vitrified pipe sewer, 8-inch to 15-inch diameter, and 13,000 linear feet vitrified pipe house connections; certified check, \$2500; Charles England, chairman, Sewerage Commission.

Sewer Construction.—Dan C. Smith, City Comptroller and Secretary, City Hall, Houston, Tex., receives bids until November 25 to construct sanitary sewers in First and Sixth wards; 28,780 linear feet of 8-inch, 2305 linear feet of 10-inch and 1050 linear feet of 12-inch sewer pipe; necessary manholes and flush tanks, etc.; pipe to be used may be as follows: All vitrified pipe or Thomas cement glazed sewer pipe. Specifications and plans, bidding blank and form of contract can be obtained at office of F. L. Dormant, City Hall, Houston; certified check \$2500; H. B. Rice, Mayor.

Sewers.—Board of Bond Trustees, W. H. Lyle, chairman, Live Oak, Fla., receives bids until 4 P. M. November 21 for all materials and constructing sanitary sewer system; work consists of about 9 1/2 miles pipe sewers from 8 to 15 inches in diameter, with sewage-

would-be land drainers right by showing them how to organize the district; prepare the plans; carry on the construction work, and keep the land dry once it is reclaimed.

So of Jefferson county there is in making a topographic map showing the elevations, streams, railroads, how and where the district should be laid off. Once this plan is put into effect, it will serve as an object-lesson to all the other Gulf coast counties that need draining. When this work is completed the office here will probably be discontinued.

Should these 14 Texas counties having large acreages of wet lands arise to the spirit of the occasion and to the work the Government has laid out for them, within a few years this vast area of almost worthless land should be worth millions of dollars to its owners.

As an illustration of this prediction, it is said that a real-estate firm in this county many years ago purchased several hundred acres at an average of a dollar or two an acre. Today they are paying \$25 per acre to get it drained. When this is done they expect to realize \$100 the acre sold for agricultural purposes.

ROY G. BOOKER.

CITY AND COUNTRY.

How Their Mutual Interests May Be Developed.

Progressive Union,
Laurel, Miss., October 18.

Editor Manufacturers Record:

In your issue of October 17 the writer read with much interest an editorial under the caption, "City and Country Interests Mutual." It seems that the Merchants' Association of Greensboro, N. C., has gone to work along about the same line adopted by our business organization, though their idea of bringing the farmer and business man closer together is a little different from ours. The editorial suggests an idea that the writer believes will prove of value to us, and in return we will give you an outline of what we are doing in an effort to accomplish the same result.

In the first place, let me state that our organization is not organized along the usual "Board of Trade" lines, and has no paid men connected with it excepting our agricultural expert. In the fall of 1911 the business men of Laurel, realizing the destruction being wrought to our cotton crop by the boll-weevil, began to cast about for some plan to successfully fight the weevil and to encourage more diversified farming along intelligent lines. The result was the organization of the Laurel Progressive Union, with the avowed purpose of taking up, for the good of the town and community, one question at a time and thoroughly threshing out that one question before going to work along any other line.

It was therefore decided to employ an agricultural expert, with long experience in the boll-weevil section of Texas, and begin first on improving our farming conditions through systematic effort.

The business men of the city—and the large sawmills, of which we have three of the largest in the South, were among the most generous contributors—subscribed and paid into the treasury a fund to conduct the work. Out of this fund we paid the salary of our agricultural expert and bought a small automobile for his use in getting about over our county. His duties were, and still are, to personally see and talk with every farmer in our immediate trade territory, advising with them as to the best methods of combating the boll-weevil, explaining the scientific side of farming and in every possible way giving the farmer personal information

and assistance. He also called meetings of the farmers at almost every small town, schoolhouse and church throughout the county, and addressed them—particularly concerning the best methods to use against the weevil, and also about fertilization, forage crops and everything in general pertaining to better farming. Those meetings, together with the daily personal visits of inspection and instruction to the individual farmer, resulted in uniformity of methods used by practically all of the farmers in our (Jones) county, and the consequent absence of the many different and more or less successful ideas about fighting the weevil which have prevented good work in other sections affected by the same pest.

The result of our experiment in rendering systematic assistance to our farmers has been extremely gratifying. The county produced more grain and feed-stuffs this year than ever before, and the cotton yield was unquestionably much larger than it would have been without this systematic work. One farmer, among many others who have expressed their thorough approval of the work, in talking with the writer stated his opinion of the work done by our agriculturalist in about these words: "A few days ago, while at work in my field, I was thinking about the help this man has given me. I thought of how little I knew of the boll-weevil and how helpless I was before he came, and of the new ideas on farming he has given me, and I just figured up that he had saved me at least two bales of cotton, which are worth, with their seed, about \$150, and that he had helped me a lot with other crops, too." This man said that his average cotton crop had been about 10 bales per year, and he further stated that he believed there were at least 100 other farmers in the county who had been saved equally as much as he. Such expressions, coming from the farmers themselves, cause us to feel that our plan of co-operation with the farmer has some good points that may be of assistance to others who are trying to improve their local farm conditions.

At a meeting of the executive committee of our organization, held yesterday, it was unanimously decided to continue the work, and a committee was appointed to collect the funds for the coming season, practically all of the subscribers to the fund of last season having already pledged themselves to again contribute.

J. P. McPHERSON, Secretary.

Politics Having No Baleful Effect.

The Niagara Falls Metal Stamping Works, Niagara Falls, N. Y., writes to the MANUFACTURERS RECORD:

"We do not see that the pending Presidential election is having any baleful effect on business or manufacturing. The high jinks and strenuous and fantastic peccadilloes that have been on exhibition in the political field are amusing, and even at times interesting, but these do not interfere much with the current of events. Trade seems to be improving, but not as rapidly as some papers represent. There is scarcity in some lines of skilled operatives, but to us it does not yet seem serious. We have no trouble in getting help. Steel and iron evidently are rallying more rapidly than are other lines, and there is coming to be the old-time difficulty in getting deliveries. In our own business that is the most pronounced evidence of an improvement that is visible."

Lead and Zinc in 1911.

The production of refined lead in the United States in 1911 was 486,976 short tons, or 16,506 tons greater than the production of 1910, and the greatest produc-

tion in any year in this country. The record was broken, too, in the production of zinc spelter, which was 286,526 short tons. Of the total, 122,515 tons were produced in Missouri.

Of the total production, 1,097,232,749 pounds, of copper in the United States in 1911. Tennessee's output was \$18,965,143 pounds.

It is stated that 34,000,000 feet of lumber are consumed annually by the furniture factories of High Point, N. C.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., October 30.

The Baltimore stock market during the past week inclined to dullness. In the trading United Railways common sold from 26 1/4 to 26; do. income bonds, 66 1/2 to 67 1/2; do. funding 5s, 88 1/2 to 89; do. notes, 104 1/2 to 105 1/2; do. 4s, 84 1/2 to 85 1/2; Consolidated Gas, Electric Light & Power common, 115 1/2 to 116 1/2; do. 4 1/2s, 88 1/2 to 89; Consolidated Gas 4 1/2s, 94 1/2 to 95 1/2; Seaboard Air Line common, 19 to 20; do. preferred, 49; Mt. Vernon-Woodberry Cotton Duck 5s, 73 1/2 to 74 1/2; G. B. S. Brewing common, 4 1/2; do. 4s, 51 1/2 to 52 1/2.

Marine Bank sold at 43; Citizens', 42 1/2; Exchange, 162; Bank of Baltimore, 165 1/2. Fidelity & Deposit was traded in at 150 1/2, and American Bonding at 76 1/2.

Other securities were dealt in as follows: Houston Oil common, trust certificates, 21 1/2 to 22 1/2, reacting to 19 1/2; do. preferred, 60; do. 6 1/2 to 69, with last sale at 68; do. dividend certificates, 84 1/2 to 85 1/2; City & Suburban (Washington) 5s, 103; Canton Company, Baltimore, 135; Fairmont & Clarksburg Traction 5s, 100 1/2 to 100 3/4; Norfolk & Portsmouth Traction 5s, 90 to 91; Atlantic Coast Line convertible debenture 4s, 103 1/2 to 104 1/2; Maryland Electric 5s, 98 1/2; Florida Southern 4s, 90 1/2; Pennsylvania Water & Power common, 72 to 70; Gary & Interurban collateral 6s, notes, 98 1/2; Northern Central Railway stock, 124 1/2 to 125; Baltimore Electric preferred, 43 1/4 to 43; Kentucky Securities preferred, 69 to 70 1/2; United States Steel, 76 1/2 to 75 1/2; Baltimore City 3 1/2s, 1930, 92 1/2; do. do. 1928, 92 1/2; do. 4s, 1920, 97; do. 5s, 1916, 103 1/4; Atlantic Coast Line rights, 3 1/2; Minneapolis & St. Paul joint 5s, 103 1/4; Virginia Railway & Power 5s, 95 1/2; Anacostia & Potomac 5s, 100; do. guaranteed, 102; Atlantic Coast Line of Connecticut, 27 1/2; Alabama Consolidated Coal & Iron 5s, 76 1/2; Maryland & Pennsylvania common, 42 1/2 to 43; Charleston Consolidated Electric 5s, 95; Georgia & Alabama Consolidated 5s, 104; Macon Railway & Light 5s, 98 1/2; Newport News & Old Point 5s, 98 1/2; Cigar Machine Corporation of America, 1 1/4; Davidson Chemical 6s, 100; Fairmont Coal 5s, 96; Merchants & Miners' Transportation Co., voting trust, 79 1/2; Norfolk Railway & Light common, 27 1/2; Wilmington & Weldon 5s, 110; Washington & Vandemere 4 1/2s, 95; Norfolk Street Railway 5s, 107; Consolidation Coal, 101 1/4; do. refunding 5s, 92 1/2 to 93; New Orleans, Mobile & Chicago 5s, 87 1/2 to 87 1/2; Pennsylvania Water & Power 5s, 92; Baltimore Electric 5s, stamped, 93 3/4.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended October 30, 1912.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	127 1/2	130
At. Coast of Conn. 4s.....	100	27 1/2	27 1/2
Georgia Sou. & Fla. 1st Pfd.....	100	91	95
Georgia Sou. & Fla. 2d Pfd.....	100	81 1/2	85
Maryland & Penna.....	100	42	45
Monon. Val. Traction Pfd.....	100	80	82 1/2
Seaboard Com.....	100	19 1/2	20
Seaboard Pfd.....	100	47	49
United Rys. & Elec. Co.....	50	25 1/2	26
Virginia Ry. & P. Com.....	100	54	54
Wash., Balto. & Annap. Pfd.....	100	29	34
Western Maryland.....	100	55	55
Bank Stocks.			
Bank of Baltimore.....	100	165 1/2	165 1/2
Citizens'.....	10	42	42
Farmers & Merchants'.....	40	51	51
German.....	100	108	120

Mechanics'.....	10	29	...
Merchants'.....	100	181	...
National City.....	100	...	110
Union.....	100	...	135
Western.....	20	37	...

Trust, Fidelity and Casualty Stocks.			
American Bonding.....	25	76 1/2	77 1/2
Baltimore Trust.....	100	150	151
Fidelity & Deposit.....	50	150	151
Maryland Trust.....	100	121	124
Maryland Casualty.....	25	100	102 1/2

Miscellaneous Stocks.			
Baltimore Brick.....	100	2	2 1/2
Pattimore Brick Pfd.....	100	21	...
Baltimore Electric Pfd.....	100	...	43 1/2
Con. Gas, Elec. Lt. & P. Com.....	100	...	115 1/2
Con. Gas, Elec. Lt. & P. Pfd.....	100	109 1/2	112
Consolidation Coal.....	100	101 1/2	101 3/4
G. B. S. Brewing Co.....	100	4 1/2	4 1/4
George's Creek Coal.....	100	1 1/2	...
Mer. & Min. Trans. Co. V. T.....	100	77 1/2	79

Railroad Bonds.			
Atlantic Coast 1st 4s.....	94 1/2	95 1/4	...
At. Coast Com. 4s, Cfs., 5-30s.....	101 1/4	102	...
At. Coast Com. 5s, Cfs.....	92	92 3/4	...
At. Coast Unifed 4s.....	103 1/2	...	...
At. Coast S. C. 4s.....	88 3/4	89 1/2	...
Carolina Central 4s.....	94 1/2	95	...
Coal & Coke Railway 5s.....	91 1/2	...	...
Coal & Iron Railway 5s.....	93 1/4	...	...
Col. & Green, 1st 6s.....	100 1/2	...	...
Florida Southern 4s.....	104	...	...
Georgia & Alabama 5s.....	90 1/4	91	...
Georgia & Florida 5s.....	104 1/4	105 1/2	...
Georgia, Car. & North, 1st 5s.....	65	66	...
Georgia Pacific 1st 6s.....	110	111	...
Georgia Southern & Fla. 1st 5s.....	104 1/2	106	...
Macon, Dublin & Savannah 5s.....	99	99 1/2	...
New Orleans Gt. Nor. 5s.....	69 3/4	70 1/4	...
New Orleans, M. & C. 5s.....	87 1/2	87 3/4	...
Raleigh & Augusta 1st 6s.....	...	115	...
Richmond & Danville 6s.....	102 1/2	104	...
Savannah, Fla. & West. 5s.....	101	111	...
Seaboard & Stumped.....	83 1/2	86	...
Seaboard Refdg. 4s.....	103 1/2	105	...
Seaboard & Roanoke 5s.....	100 1/2	103 1/2	...
Suffolk & Carolina 5s.....	100 1/2	103 1/2	...
Virginia Midland 5th 5s.....	104 1/2	...	...
Wash., Balto. & Annap. 5s.....	88 1/2	90	...
Washington Terminal 3 1/2s.....	88 1/2	...	...
Washington-Vandemere 4 1/2s.....	94 1/2	95 1/2	...
Wilmington & Weldon 5s.....	110	110 1/2	...

Street Railway Bonds.			
Anacostia & Potomac 5s.....	98 1/2	100 1/4	...
Anacostia & Potomac 5s, Gtd.....	102	...	...
Atlanta Com. Street Railway 5s.....	104 1/2	104 3/4	...
Balt., Sp. Pt. & C. 4 1/2s.....	95 1/2	106 1/2	...
Baltimore Traction 1st 5s.....	95	96	...
Charleston Com. Electric 5s.....	95	96	...
City & Suburban 5s (Balt.).....	104 1/2	105	...
City & Suburban 5s (Wash.).....	103	105	...
Danville Traction 5s.....	91 3/4	92 3/4	...
Fairmont & Clarksburg Traction 5s.....	100	100 1/2	...
Knoxville Traction 5s.....	105	106	...
Lexington Railway 1st 5s.....	94	95	...
Macon Railway & Light 5s.....	98 1/2	99	...
Maryland Electric Railway 5s.....	98 1/2	98 1/2	...
Memphis Street Railway 5s.....	98	99 1/2	...
Newport News & Old Pt. 5s.....	99 1/2	99 1/2	...
Norfolk & Portsmouth Traction 5s.....	90 1/2	91	...
Norfolk Railway & Light 5s.....	100 1/2	100 1/2	...
Norfolk Street Railway 5s.....	106 1/2	108	...
Norfolk & Atlantic Term. 5s.....	92	94	...
United Railways 1st 4s.....	84 1/2	84 1/2	...
United Railways Income 4s.....	65 1/2	65 1/2	...
United Railways Funding 5s.....	67 1/2	68	...
United Railways Notes.....	103 1/2	103 3/4	...
Virginia Railway & P. 5s.....	95 1/2	97 1/2	...

Miscellaneous Bonds.			
Alt. Com. Coal & Iron 5s.....	76	78 1/2	...
Baltimore Electric 5s, 8 1/2s.....	97	97	...
Consolidated Gas 5s.....	107 1/2	108	...
Consolidated Gas Pgs.....	94	94 1/2	...
Con. Gas, Elec. Lt. & P. 4 1/2s.....	88	88 1/2	...
Consolidation Coal Ref. 4 1/2s.....	92 1/2	92 1/2	...
Consolidation Coal Ref. 5s.....	92 1/2	93 1/4	...
Fairmont Coal 1st 5s.....	95 1/2	96	...
G. B. S. Brewing 1st 4s.....	50 1/2	51	...
G. B. S. Brewing Income 5s.....	60 1/2	61 1/2	...
Jackson Coal & Coke 5s.....	93 1/4	94 1/2	...
Maryland Steel Co. 5s.....	99 1/2	100	...
Mt. Vernon-Woodby Cot. Duck 5s.....	73	73 1/2	...
United Elec. Lt. & P. 4 1/2s.....	91 1/2	93	...

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending October 28.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	70	75
Alben Mfg. Co. (S. C.).....	55	55
American Spinning Co. (S. C.).....	162	162
Anderson Cotton Mills (S. C.).....	48	48
Anderson Cot. Mills (S. C.) Pfd.....	100	100
Arcadia Mills (S. C.).....	90	90
Arkwright Cotton Mills (S. C.).....	99	100
Belton Mills (S. C.).....	100	110
Brandon Mills (S. C.).....	90	90
Brogan Mills (S. C.).....	160	160
Chiquola Mfg. Co. (S. C.).....	97	97
Clifton Mfg. Co. (S. C.) Pfd.....	120	120
Clinton Cotton Mills (S. C.).....	93	93
Courtney Mfg. Co. (S. C.).....	99	99
Dallas Mfg. Co. (S. C.).....	75	75
D. E. Converse Co. (S. C.).....	90	90
Drayton Mills (S. C.).....	106	106
Eagle & Phenix Mills (Ga.).....	162	175
Enoree Cotton Mills (S. C.).....	25	25
Enoree Mfg. Co. (S. C.) Pfd.....	85	100
Gaffney Mfg. Co. (S. C.).....	72	72
Gainesville Cotton Mills (Ga.).....	72	80
Glenwood Cotton Mills (S. C.).....	130	140
Graniteville Mfg. Co. (S. C.).....	135	145
Greenwood Cotton Mills (S. C.).....	57	60
Gruedel Mills (S. C.).....	90	100
Hartsville Cotton Mill (S. C.).....	160	160
Hennietta Mills (N. C.).....	100	175
Imman Mills (S. C.).....	80	80
King Mfg. Co., J. P. (Ga.).....	130	130
Lancaster Cotton Mills (S. C.).....	97	100
Lancaster Cot. Mills (S. C.) Pfd.....	75	75
Langley Mfg. Co. (S. C.).....	125	125
Laurens Mills (S. C.).....	155	160
Limestone Mills (S. C.).....	60	60
Lockhart Mills (S. C.) Pfd.....	90	100
Loray Cotton Mills (N. C.) Pfd.....	70	70
Mariboro Cotton Mills (S. C.).....	90	102
Mills Mfg. Co. (S. C.).....	90	102
Molokhon Mfg. Co. (S. C.).....	90	90

[For Additional Financial News, See Pages 74 and 75.]

Established 1835
The Merchants National Bank
 South and Water Sts., BALTIMORE, MD.
 DOUGLAS H. THOMAS, President.
 WM. INGLE, Vice-Pres. and Cashier.
 J. C. WANDS, Asst. Cashier.
 JOHN B. H. DUNN, Asst. Cashier.
 Capital \$1,500,000
 Surplus and Profits - - - \$900,000
 Deposits \$12,000,000
 Accounts of Banks, Bankers, Corporations and Individuals solicited. We invite correspondence.

THE FIRST NATIONAL BANK
 OF KEY WEST, FLA.
 United States Depository and Disbursing Agent.
 Capital - - - - - \$100,000
 Surplus and Undivided Profits - \$40,000
 A general banking business transacted. Special attention given to collections.

INVESTMENT SECURITIES
 Southern Stocks and Bonds
 Municipal and Corporation
 Cotton Mill Stock a Specialty
 WM. S. GLENN, Broker, SPARTANBURG, S. C.

JOHN NUVEEN & CO.
 1st Nat. Bank Bldg., CHICAGO
 We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.
 Write us if you have bonds for sale.

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 WILMINGTON, DELAWARE
 INCORPORATING under broad, liberal, safe and stable Delaware laws. A fully equipped department for proper organization and registration of corporations.
 BANKING AND TRUST department gives special attention to out of town customers' accounts.
 TITLE DEPARTMENT examines and guarantees title to realty throughout Delaware.
 REALTY DEPARTMENT has sites for manufacturing industries. Modern Methods of management of property.
 EDWARD T. CANBY, President.
 J. ERNEST SMITH, V.-Pres. and Gen. Counsel.
 WM. G. TAYLOR, Treasurer.
 HARRY W. DAVIS, Secretary.
 W. W. PUSEY, 2d Title and Real Estate Officer.

H. B. Wilcox, President Blanchard Randall, V.-Pres.
 Wm. S. Hammond, Cashier
 Saml. W. Tschudi, A. Cash. R. E. Bolling, A. Cash.
The First National Bank
 17 South St., Baltimore, Md.
 Capital - - - - - \$1,000,000
 Surplus and Net Profits - - - 400,000
 Deposits - - - - - 6,500,000
 Especially well equipped to handle the business of Southern Banks, Corporations, and Individuals and Manufacturers. We cordially invite correspondence and interviews.

The National Exchange Bank
 OF BALTIMORE, MD.
 Hopkins Place, German and Liberty Streets
 Capital, \$1,000,000
 July 15th, 1908. Surplus and Profits, \$671,631.60
 OFFICERS
 WALDO NEWCOMER, President.
 SUMMERFIELD BALDWIN, Vice-Pres.
 R. VINTON LANSDALE, Cashier.
 C. G. MORGAN, Asst. Cashier.
 Accounts of Mercantile, Firms, Corporations, Banks, Bankers and Individuals invited.

SURETY BONDS
Fidelity & Deposit Co.
 OF MARYLAND
 Home Office, - - BALTIMORE, MD.
 Total Assets Dec. 31, 1911, \$8,133,000.57
 Pioneer Surety Co. of the South.
 Becomes Surety on bonds of every description.

AGENTS IN ALL PRINCIPAL CITIES
 HARRY NICODEMUS, EDWIN WARFIELD,
 Sec'y and Treas. President

Southern Steam Railroad Securities
 DEALT IN
F. J. LISMAN & CO.
 Specialists in Steam R. R. Securities
 Members New York Stock Exchange
 30 Broad Street NEW YORK
 39 Pearl Street, Hartford
 Land Title & Trust Bldg., Philadelphia

CAPITAL AND SURPLUS - - - - - \$3,500,000

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BALTIMORE, MD.

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 Interest Allowed on Deposits Subject to Check.
 Special Rates Made on Time Deposits.

DOUGLAS H. GORDON, President
 EDWIN W. POE, Sec.-Treas.
 OFFICERS
 CHAS. D. FENHAGEN, Vice-Prest



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 The Fifth-Third National Bank
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 (Brokers) GEO. B. EDWARDS, Pres.
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 Negotiations, Investigations, Settlements, Purchases of Property, Information
CHARLES NEVILLE
 Certified Public Accountant
 501-502 Savannah Bank & Trust Co. Bldg.
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 Proven Public Utility Securities
 Correspondence Solicited
Electric Bond and Share Company
 (Paid-up Capital and Surplus, \$9,500,000)
 71 Broadway New York

RESOURCES - - - - - \$14,975,352.57
 DEPOSITS DEC. 31, 1909 \$ 8,041,252.59
 DEPOSITS DEC. 31, 1910 8,809,843.00
 DEPOSITS DEC. 31, 1911 10,344,570.57

This growth indicates that we have the ability and disposition to give GOOD TRUST COMPANY SERVICE. We can prove it—to your advantage.
 ALLOWS INTEREST on daily balances of \$500 or over, subject to check, and special rates for time deposits.
 ACTS AS TRUSTEE under mortgage, Registrar and Transfer Agent of Stocks and Bonds of Corporations.
 Securities held on deposit for out-of-town corporations and individuals.
 Acts as Financial Agent for Municipalities and Corporations.

MERCANTILE TRUST & DEPOSIT COMPANY

OF BALTIMORE

CAPITAL - \$1,500,000.00

SURPLUS - \$3,000,000.00

Monaghan Mills (S. C.)	105
Monarch Cotton Mills (S. C.)	110
Newberry Cotton Mills (S. C.)	125
Ninety-Six Cotton Mills (S. C.)	130
Norris Cotton Mills (S. C.)	115
Orr Cotton Mills (S. C.)	90
Pacolet Mfg. Co. (S. C.)	94
Pacolet Mfg. Co. (S. C.) Pfd.	95
Parker Common.	20
Parker Pfd.	63
Pelzer Mfg. Co. (S. C.)	120
Poe Mfg. Co., F. W. (S. C.)	110
Saxon Mills (S. C.)	115
Spartan Mills (S. C.)	125
Trion Mfg. Co. (Ga.)	130
Tucapau Mills (S. C.)	350
Union-Buffalo (S. C.) 1st Pfd.	90
Union-Buffalo (S. C.) 2d Pfd.	16
Victor Mfg. Co. (S. C.)	110
Warren Mfg. Co. (S. C.)	80
Warren Mfg. Co. (S. C.) Pfd.	105
Washington Mills (Va.)	25
Washington Mills (Va.) Pfd.	105
Watts Mills (S. C.)	70
Wicannett Mills (N. C.)	135
Whitney Mfg. Co. (S. C.)	110
Williamson Mills (S. C.)	130
Woodruff Cotton Mills (S. C.)	95
Woodside Cotton Mills (S. C.)	100

Investment Bankers' Association.

The report of the organization meeting of the Investment Bankers' Association of America, held in New York, has been published in attractive pamphlet form. This organization, designed to further co-operation among investment banking-houses, was perfected in August with the following officers: George B. Caldwell of Chicago, president; A. B. Leach of New York, Frank W. Rollins of Boston, William R. Compton of St. Louis, Lewis B. Franklin of New York, Warren S. Hayden of Cleveland, vice-presidents; Frederick R. Fenton of Chicago, secretary; C. T. Williams of Baltimore, treasurer; George Garr Henry, Ernestus W. Bulkley, Harold B. Clark, Allen G. Hoyt of New York, Charles H. Schweppe, W. M. L. Fiske, C. W. McNear of Chicago, George W. Kendrick III, George K. Reilly of Philadelphia, J. Herndon Smith, Harold Kaufman of St. Louis, S. W. Webb, Stedman Buttrick of Boston, Charles A. Otis of Cleveland, Henry L. Duer of Baltimore, R. L. Seoville of Pittsburgh, Charles R. Dunn of Detroit, Sam B. Wakefield of San Francisco, Harry E. Weil of Cincinnati, Eugene M. Stevens of Minneapolis, H. P. Wright of Kansas City, C. Edgar Elliott of Indianapolis, A. C. Foster of Denver and Herbert Witherspoon of Spokane, board of governors.

All About Bond Selling.

"The Work of the Bond House," by Lawrence Chamberlain, author of "The Principles of Bond Investment," has been issued by Moody's Magazine Book Department, 35 Nassau street, New York. This excellent treatise of more than 150 pages will be perused with interest by everyone interested at all in bonds, and who is fortunate enough to obtain a copy. It is full of information about the bond business considered from every point of view, and to miss reading it is to fail being as thoroughly posted as one ought to be if they have anything to do with securities. It will help the seller as well as the purchaser of bonds, whether the latter be a dealer or an investor.

FINANCIAL CORPORATIONS.

Ala., Geneva.—The Farmers' National Bank of Geneva, capital \$50,000, is being organized by A. R. Chapman, correspondent, Geneva, Ala.; E. S. More, L. A. Boyd, C. A. O'Neal, J. L. Warren and W. O. Murphy.

Ala., Montgomery.—The Fidelity Mortgage & Bond Co. is reported to have filed articles of incorporation; capital \$300,000; T. E. Lovejoy, president; L. B. Whitfield and M. L. Grell, vice-presidents; F. D. Kirven, secretary; J. W. Kelly, vice-president and treasurer, and W. H. Sanford, general counsel.

Ark., Amity.—Official: The Farmers and Merchants' Bank chartered; capital \$25,000; directors, Hanson J. Marks, president; W. W. Watson and H. B. Griffiths, vice-presidents; N. W. McLeod, G. W. Studdard, Henry Rolling, W. E. Grayson, A. W. Ramsey and F. T. Powell. Business is to begin about November 10.

Ark., Little Rock.—Official: The Commonwealth Trust Co. incorporated; capital \$200,

000; surplus \$50,000; Charles Berner, president; Lew Hagg, secretary, and L. H. Bradley, treasurer. Business to begin January 1, 1913.

Fla., Auburndale.—Official: The State Bank of Auburndale chartered and incorporated; capital \$15,000; directors, W. S. Ryall, president; A. J. Mobley and C. M. Clayton, vice-presidents; C. W. Deen, W. G. Jones and John Patterson. C. F. O'Daniel is cashier. Business began October 14.

Fla., Auburndale.—Official: The State Bank of Auburndale chartered; began business October 14 with W. S. Ryall, president; A. J. Mobley, vice-president; C. M. Clayton, second vice-president; C. F. O'Daniel, cashier.

Fla., Bushnell.—Official: The Citizens' Bank incorporated; capital \$15,000; J. M. Harvey, Tampa, Fla., president; W. T. B. Davison, Nashville, Ga., and W. A. Collins of Bushnell, Fla., vice-presidents; R. F. Collins, Bushnell, cashier. Business is to begin January 1, 1913. This has been a branch bank, but will now be independent.

Fla., Clermont.—The First State Bank of Clermont is reported chartered; capital \$15,000; J. H. Compton, president; C. O. Roe, vice-president, and C. H. Goodenough, cashier.

Fla., Jacksonville.—The Atlantic Fire Insurance Co. is reported chartered; capital \$50,000; Wm. E. Alexander, president; Frank S. Porter, secretary.

Fla., Miami.—A building and loan association, capitalized at \$500,000, is reported being organized by Theodore Hofstatter, J. N. Lummus, Joseph A. McDonald, Marcus A. Milam, Frank B. Stoneman, John Seybold, Frank B. Shotts, Julius Smith, C. H. Ward, Frank B. Shotts will be president; Julius Smith, vice-president; C. H. Ward, secretary, and J. N. Lummus, treasurer.

Fla., Sebring.—The Bank of Sebring is reported chartered; capital \$15,000; R. J. McMurray, president; Henry Henning, vice-president, and Ed. L. Hainz, cashier.

Fla., Tallahassee.—The Citizens' Bank of Tallahassee has published its charter; capital \$50,000; incorporators, J. A. McLaurin, J. M. Fleming and C. R. McLaurin, Tallahassee; R. A. McTyler, Atlanta, Ga.; L. O. Benton, Monticello, Ga., and W. Minter, Carabelle, Fla.

Ga., Atlanta.—The Colonial Trust Co. is reported to have been granted a charter; capital \$250,000; incorporators, Joseph H. Williams, Porter Langston, M. C. King, J. S. Slicer and H. O. Grady.

Ga., Cuthbert.—Official: The First National Bank expected to begin business about November 1; capital \$50,000; surplus \$5000; F. H. Davis, president; A. J. Moye and R. D. Gay, vice-presidents; P. M. Reid, cashier. This succeeds the Bank of Randolph.

Ga., Habersham.—The Citizens' Bank of Habersham is reported organized with \$25,000 capital; directors, John A. Hodges, president; T. M. Sineath, first vice-president; Dr. F. F. McNeal, second vice-president; C. F. Lindsey, Dr. B. L. Wilkinson, Drew Vickers, James C. Scruggs, E. F. McMillan, A. N. King, E. J. Griffin. F. D. McGarity is cashier.

Mo., Jefferson City.—Official: The Cole County Bank chartered; capital \$25,000. Business is to begin November 9. Joseph Pepe is among those interested.

Ga., Temple.—The Farmers' State Bank, capital \$25,000, is reported to have made application for a charter; incorporators, C. L. McPherson, W. M. Cobb, R. M. Thomasson, J. T. West, D. N. Adams, W. E. Green, W. L. Stedham, E. S. Beasley, J. T. Davis, F. M. Spake, J. S. Michael and J. M. Baker. Mr. L. O. Woodruff, formerly of Covington and Jeffersonville, will be cashier.

Md., Baltimore.—The New Progressive Permanent Building Association, capital \$100,000, is incorporated by Harry L. Caplan, Robert Seff, Aaron M. Jacob, Solomon W. Roenthal, Meyer Koplinick, Mayer Reznick, Jos. B. Smotritsky, Jacob Kornblatt and Harry T. Kellman.

Miss., Philipp.—The Planters' Bank is reported to have filed articles of incorporation; capital \$10,000; incorporators, R. C. Townes, E. C. Liddell and W. H. Dick.

Mo., Carthage.—H. B. McDaniel, president of the Union National Bank, and W. J. McDaniel of Springfield are reported organizing a new bank.

N. C., Enfield.—The Enfield Building and Loan Association is reported to have filed its charter.

N. C., McDonalds.—Official: The Bank of McDonalds chartered; authorized capital, \$25,000; paid in, \$10,000. Directors: H. M. McAllister, president, Lumberton, N. C.; L. R. Hamer, vice-president, Raynham, N. C.; J. L. Townsend, F. M. Davis, D. H. Britt, Jr., and D. A. McCormick, all of McDonalds; A. D. Barnes, L. McK. Parker and H.

M. McAllister, Lumberton, N. C.; Dr. G. M. Pate and L. R. Hamer, Raynham, N. C.; C. T. Pate, Purvis, N. C., and J. E. Price, Fairmont, N. C. L. B. Townsend is cashier. Business is to begin November 15.

Okla., Collinsville.—Reported chartered: The Collinsville National Bank; capital \$25,000; C. L. Goodale, president; John A. Carter, cashier. This succeeds the Farmers and Merchants' Bank of Collinsville.

S. C., Cades.—The Bank of Cades is reported to have begun business. Among the stockholders are Col. Thomas Wilson of Sumter, F. L. Wilcox of Florence, W. E. Nesmith of Cades.

S. C., Charleston.—A new bank is reported being organized by T. S. Wilbur, and business is expected to begin about January 1, 1913.

S. C., Centenary.—The Bank of Centenary is reported chartered; capital \$25,000; W. M. Byck, president; W. E. Stanley, vice-president, and A. O. Johnson, cashier.

S. C., Columbia.—The Manufacturers' Guaranty Co. of Columbia, capital \$100,000, is re-

Drainage Bonds

The entire issue, \$142,000, of the bonds of District No. 1 of the Upper Terrebonne Drainage District is for sale, delivery October 10 prox.

This is a municipal issue, approved by the State Board of Engineers, carries 5 per cent. interest and runs from 5 to 35 years. It is under the new law which has been sustained by the Supreme Court.

It is secured by 423 acres of the richest sugar and corn land in the world, which is entirely surrounded by the finest sugar plantations and farms in America.

With proper drainage these lands will produce from 40 to 60 tons of sugar to the acre, worth on the farm from \$3.50 to \$4 per ton.

Leases are in demand on these lands at 50 cents per ton a year.

The Louisiana drainage law is an improvement on any other law in the United States. A copy will be sent on request.

As we do not need this money only as work progresses, we can sell the issue to be paid \$10,000 per month. Maps, specifications of work and description of the property promptly furnished.

While we are carrying the work right along, we have no contract out for it, and we are ready to contract it to the responsible party who will take bonds in payment.

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411 Audubon Bldg., New Orleans.

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OLD DOMINION LAND COMPANY
NEWPORT NEWS, VA.

ported chartered; Jos. Norwood, president and treasurer; James A. Carlisle, secretary, and J. W. Norwood, vice-president; directors, Jos. Norwood, T. B. Stackhouse, Chas. H. Barron, J. W. Norwood, G. A. Norwood, Z. T. Wright, A. F. McKissick, J. H. Morgan, D. R. Coker, P. A. Willcox and Leroy Springs.

S. C., Holly Hill.—The Farmers and Merchants' Bank of Holly Hill is reported to have been granted a commission; capital \$15,000; petitioners, S. J. McCoy, L. A. Carson, W. A. Moor and W. A. Jeffers.

S. C., Lamar.—The People's Bank of Lamar is reported chartered; capital \$30,000; officers, D. T. McKelthan, president; C. A. Smith, vice-president, and E. M. Lowman, cashier.

S. C., Prosperity.—The Farmers' Bank of Prosperity is reported organized with the following directors: Jas. A. Hoyt, president of the People's Bank, Columbia, president; S. J. Kohn, E. M. Cook and S. S. Birge, vice-presidents; H. T. Patterson, cashier; W. E. Wallace, A. B. Langley, J. C. Neel, A. S. Manning, A. H. Kohn; the finance committee, E. M. Cook, S. J. Kohn and H. T. Patterson; E. S. Blease, attorney.

S. C., Winnsboro.—The Winnsboro Trust Co. is reported chartered; capital \$25,000; T. H. Ketchin, president; J. W. Cathcart, vice-president; A. B. Cathcart, secretary and treasurer.

Tenn., Lewisburg.—The First National Bank, recently chartered with \$25,000, is reported to have elected the following officers: J. P. Dwiggins, president; R. H. Terry, vice-president; B. C. Dysart, secretary. Business is expected to begin soon.

Tex., Hewitt.—The First State Bank is reported chartered with \$10,000 capital; incorporators, W. D. Chapman, D. L. Chapman and M. C. Chapman of Hewitt, together with W. W. Woodson, John F. Wright and W. H. McCullough of Waco.

Tex., San Antonio.—The Commonwealth Investment Co. of San Antonio, capital \$300, is reported incorporated by J. C. Bland, C. M. Stone and E. L. Dennis, Jr.

Tex., Santa Maria.—A new bank capitalized at \$10,000 is reported being organized by R. H. Kern and others. N. W. Austin, formerly of St. Louis, will, it is said, be president.

Tex., Sherwood.—A private bank is reported organized with the following directors: Tol Rutledge, president; W. M. Tolson, cashier; John and Newel Hodge and J. M. Lindsey.

Tex., Waco.—The Brazos Banking Co., capital \$500, is reported incorporated by H. A. Linke, W. C. Turner and H. F. Schaffer.

Va., Riner.—Official: The Bank of Riner incorporated; capital \$15,000; G. D. Surface, president; J. L. Lawrence, vice-president; G. T. Surface, secretary and treasurer. Business is to begin December 1.

Va., Richmond.—The Richmond Trust & Savings Co. will begin business November 1 at 119 E. Main St.; John Skeiton Williams, president; James G. Tinsley and E. L. Bemiss, vice-presidents; R. J. Willingham, Jr., assistant treasurer and assistant secretary.

Va., Sedley.—The Bank of Sedley, capital \$15,000 to \$25,000, is reported chartered. Incorporators: Philips Rogers, president; R. L. Ralford, vice-president, secretary and cashier; J. H. Boyd; all of Ralford.

Va., Winchester.—The Building and Loan Corporation is reported to have been granted a commission; capital \$300,000; incorporators, L. E. Cooper, president; Shirley Carter, secretary; C. M. Hansboro, all of Winchester.

NEW SECURITIES.

Ala., Linden.—Through the efforts of the Marengo County Bank school bonds are reported to have been floated.

Fla., Clearwater.—Official: Farson, Son & Co., Chicago, Ill., purchased at 98 the \$30,000 of street paving, \$8,000 of public pier and \$20,000 of public park 5 per cent. 30-year bonds; denomination \$500; dated October 1, 1912; maturity October 1, 1942. Chas. H. Evans is Mayor.

Ala., Selma.—City Clerk H. H. Gellatt writes: "We contemplate issuing \$35,000 of school bonds (not yet sold), and when all paying on Broad St. is completed expect to issue between \$20,000 and \$40,000 paying bonds additional." Recent press reports stated that the bonds had been purchased by the American Finance & Bond Co.

Fla., Fort Pierce.—Bids will be received until 8 P. M. January 15 for \$10,000 of 6 per cent. 30-year public utility bonds; dated January 1, 1912; denomination \$500. Address F. M. Tyler, City Clerk.

Fla., Fort Lauderdale.—Ulen & Co., Chicago, are reported to have been awarded at

\$135 premium \$40,000 of 6 per cent. 20-year water, street and sewer bonds.

Fla., Milton.—Official: Defeated: Santa Rosa county road bonds. H. W. Thompson is Clerk.

Fla., Miami.—Bids will soon be asked, it is reported, for \$300,000 of Dade county bonds voted September 17.

Fla., Mulberry.—Official: Voted: \$20,000 of sewer and \$5,000 of water bonds. E. H. Dudley is acting Mayor, and W. P. Read, A. S. McKillop and H. P. Rayne bond trustees.

Fla., Orlando.—Reported voted: \$140,000 of 5 per cent. 10-40-year sewerage bonds.

Fla., Orlando.—Official: \$200,000 of 5 per cent. city bonds and \$26,000 of first mortgage notes bearing 6 per cent. are offered for sale. Address W. L. Van Duzer & Co., Orlando. Further particulars will be found in the advertising columns.

Fla., Pensacola.—December 24, it is reported, an election is to be held to vote on \$400,000 of bonds for construction of two municipal docks, equipped with necessary switches and motive power to connect with other docks, railroad and industries.

Fla., Quincy.—Official: The Quincy State Bank purchased on May 28 at 102 the \$100,000 of 5 per cent. Gadsden county courthouse bonds; denomination \$1000; dated July 1, 1912. Bonds were voted May 16, 1911.

Fla., Tampa.—Official: Bids will be received until 2 P. M. December 4 for \$1,700,000 of 5 per cent. municipal improvement bonds; denomination \$1000. Address Board of Commissioners of Public Works, D. B. McKay, chairman; Allen Thomas, clerk. Further particulars will be found in the advertising columns.

Ga., Americus.—Regarding report that election is to be held to vote on \$45,000 of school bonds, J. E. Mathis, Mayor, writes that the matter has not been settled in any way, merely being read in Council for the first time.

Ga., Augusta.—Bids will be opened on November 14, it is reported for \$500,000 of 4½ per cent. 30-year bonds, this being the first instalment of the \$1,250,000 of bonds to be issued for flood protection, new hospitals and water-works; denomination \$1000.

Ga., Byronville.—Official: Hillsman Company, Atlanta, purchased at 103 the \$10,000 of 6 per cent. school bonds voted September 12, 1912; dated December 1, 1912; maturity 1937. Address The Mayor.

Ga., Camilla.—Reported voted: \$10,000 of city hall, \$10,000 of water and light, \$5,000 of school and \$2,500 of sewer bonds.

Ga., Lawrenceville.—Bids will be received until 4 P. M. November 21 for \$15,000 of 5 per cent. 30-year sewer bonds; denomination \$1000; dated November 1, 1912; maturity November 1, 1942. L. R. Martin is Mayor and J. H. Britt, clerk.

Ga., Quitman.—Bids will be received until November 4, it is reported, for \$50,000 of courthouse and jail bonds. Address Supervisors of Brooks county, W. W. Foster, Clerk.

Ga., Williamson.—Reported voted: School-building bonds.

Ky., Lexington.—November 5 an election is to be held to vote on \$50,000 of park and \$200,000 of sewerage 4 per cent. 40-year bonds. J. E. Cassidy is Mayor and Jas. J. O'Brien City Clerk.

Ky., Mount Vernon.—Official: Defeated: \$100,000 of Rockcastle county road-improvement bonds.

Ky., Pineville.—Official: Hoehler & Cummings, Toledo, O., have purchased \$15,000 of the \$30,000 of 5½ per cent. school-building bonds voted November 5, 1911; denomination \$500; dated August 1, 1912; maturity August 1, 1932. The other \$15,000 is pending court decision as to validity.

Md., Snow Hill.—Official: Bids will be received until noon November 26 for \$25,000 of 5 per cent. Worcester county road-improvement bonds; dated January 1, 1913; maturity, two bonds on July 1, 1945, and four bonds each year thereafter until the whole issue shall be paid; denomination \$500. J. Edward White is Clerk and Treasurer. Further particulars will be found in the advertising columns.

Miss., Biloxi.—The question of issuing jail construction bonds is reported under consideration.

Miss., Coffeeville.—A. J. McMahon of Oklahoma City is reported to have purchased \$15,000 of 5 per cent. Yalobusha county courthouse bonds at 102.50 and \$7,000 of 5½ per cent. road bonds at 104.50; denomination \$1000.

Miss., Magnolia.—An election is soon to be held in Pike county, it is reported, to vote

on \$20,000 of agricultural high-school bonds.

Miss., McHenry.—Reported that date for receiving bids for \$1500 of 6 per cent. 20-year funding bonds has been indefinitely postponed. J. E. Byrd is Town Clerk.

Miss., Pickens.—Notice is given that the city proposes to issue \$5000 of school building and \$1500 of electric-light plant bonds. W. S. Pierce is Mayor and J. F. Wilburn, clerk.

Miss., Paulding.—November 5, it is reported, an election is to be held in Jasper county to vote on good-roads bonds in the sum of \$25,000 each in supervisors' districts Nos. 1, 2 and 3, and \$35,000 in supervisors' district No. 4.

Miss., Poplarville.—H. K. Rause, clerk Pearl River county, denies report that an election has been called to vote on road bonds.

Mo., Frederickstown.—Reported that A. V. Downs, City Clerk, will receive bids until November 1 for \$12,000 of 5 per cent. electric-light plant construction bonds; denomination \$500; dated November 1, 1912; maturity November 1, 1932, subject to call beginning November 1, 1917.

Mo., Joplin.—Reported that \$200,000 of park and boulevard bonds are to be issued.

Mo., Mexico.—An election is to be held in Audrian county in November, it is reported, to vote on \$25,000 of jail bonds.

N. C., Boone.—Bids will be received by L. A. Sands, clerk Board of Trustees of Watauga County, until November 12 for \$100,000 of 5 per cent. 20-year railroad-aid bonds.

N. C., Gastonia.—November 30, it is reported, an election is to be held to vote on \$70,000 of municipal improvement bonds as follows: Streets and highways, \$35,000; sewers, \$12,000; water, \$10,000; lights, \$2500, and schools, \$10,000.

N. C., Statesville.—Well, Roth & Co., Cincinnati, are reported to have purchased \$5,000 of 5 per cent. street-improvement bonds at a premium of \$225, with accrued interest; denomination \$500.

Okla., Enid.—Peter Bowers, Mayor, it is reported, received bids until October 28 for \$25,000 of 5 per cent. 25-year gas bonds; dated November 1, 1912; maturity November 1, 1937; denomination \$500.

Okla., Sallisaw.—Official: M. S. Blasingame purchased at \$900, on September 13, for Speer & Dow, \$900 of 6 per cent. 10-20-year bonds for purchasing site, building and furnishing schoolhouse. C. C. Bibb is Clerk District 10.

Okla., Tulsa.—The Attorney-General is reported to have approved \$7000 of library site bonds, voted over a year ago, and steps are to be taken, it is said, to issue them immediately.

Okla., Wellston.—Official: \$2000 of 6 per cent. park bonds will soon be issued; denomination \$100; maturity 1922. C. Geiser is Mayor.

Tenn., Jonesboro.—At noon on November 4 the County Court of Washington county will offer at public auction \$25,000 of 6 per cent. county courthouse bonds; denominations, \$100 to \$1000. E. H. Hensley is county chairman.

Tenn., Johnson City.—November 21, it is reported, an election is to be held to vote on \$50,000 of high-school bonds.

Tex., Abilene.—The Commissioners' Court of Taylor county is reported to have purchased \$6000 of Buffalo Gap, \$1500 of Potasi and \$800 of Union Bridge, Taylor county, school bonds.

Tenn., Arlington.—Reported voted: \$10,000 of water-works-plant bonds.

Tex., Austin.—The Attorney-General has approved the following securities: \$500 of 5 per cent. 20-year bonds of Collingsworth common school district No. 10; \$500 of 5 per cent. 40-year bonds of Coke county common school district No. 18; \$75,000 of district No. 8 and \$100,000 of district No. 9, Ellis county road improvement 5 per cent. 10-40-year bonds; \$15,000 of 5 per cent. 5-30-year bonds of Emma, Crosby county, common school district No. 4.

Tex., Bastrop.—Ulen & Co. of Chicago, Ill., are reported to have purchased \$50,000 of 5 per cent. 40-year bonds of Bastrop road district No. 2, and the Provident Savings Bank & Trust Co. of Cincinnati, O., \$100,000 of 5 per cent. 40-year bonds of Smithville road district No. 1. J. B. Price is County Judge.

Tex., Brady.—November 16, it is reported, an election is to be held to vote on \$12,250 of water and light bonds.

Tex., Campbell.—Official: Bids were opened on October 28 for \$12,000 of 5 per cent. 1-40-year school bonds; denomination \$300; dated August 20, 1912. Bonds were voted August 17, 1912. A. M. Butler is president

Board of Trustees, and R. A. B. Craig, secretary.

Tex., Canadian.—Reported voted: \$31,000 of 5 per cent. 20-40-year water and sewer bonds.

Tex., Franklin.—Official: Voted: \$500,000 of 4 and 5 per cent. Franklin county road bonds.

Tex., Henderson.—Reported voted: \$25,000 of bonds for school building for North Henderson.

Tex., Houston.—William R. Compton Bond & Mortgage Co. of St. Louis is reported to have purchased at par, accrued interest and premium of \$7000 the \$2,500,000 of public improvement bonds. Baldwin Rice is Mayor. (See Manufacturers Record July 18.)

Tex., Irving.—Reported voted: \$13,000 of independent school district bonds.

Tex., Kerrville.—Reported that \$20,000 of 5 per cent. 15-20 year street-improvement bonds were recently purchased by Chas. Schreiner.

Tex., Longview.—Reported voted: \$100,000 of water-works extension bonds.

Tex., Marfa.—Bonds for water-works are soon to be issued. H. C. Whitfield is secretary Marfa Chamber of Commerce.

Tex., Quitman.—Reported that Wood county has sold \$120,000 of 5 per cent. 10-40 year road and bridge bonds.

Tex., Plainview.—November 9, it is reported, an election is to be held to vote on \$10,000 of street-improvement and \$10,000 of sewer bonds.

Tex., Waxahatchie.—The Harris Trust and Savings Bank of Chicago is reported to have purchased at 98 and interest \$38,000 of District No. 9 and \$72,000 of Bonds District No. 8 5 per cent. Ellis county bonds.

Va., Bridgewater.—The New First National Bank of Columbus is reported to have purchased at par \$25,000 of 5 per cent. 20-year water and sewer bonds. O. W. Wine is chairman finance committee.

Va., Chase City.—Official: J. B. McCrary Company, Atlanta, Ga., have purchased \$15,000 of 5 per cent. 30-year water and sewerage bonds; denomination \$1000; dated October 1, 1912. Bonds were voted August 29, 1912.

Va., Clifton Forge.—The Equitable Life Assurance Society of the United States purchased on November 1, at par and accrued interest, the \$190,000 of water-works bonds. T. P. Halloran is chairman finance committee.

Va., Danville.—Steps are reported being taken to issue \$100,000 of school bonds.

Va., Marion.—The election to vote on \$150,000 of Marion District and \$75,000 of St. Claire District, Smyth county, 5 per cent. 30-year bonds will, it is reported, be held November 5.

Va., Newport News.—Reported that all bids received October 21 for the \$250,000 of 4½ per cent. 40-year small boat harbor bonds were rejected, and that new bids will probably be asked. M. H. Lash is chairman finance committee.

Va., Purcellville.—November 16, it is reported, an election is to be held to vote on \$5000 of light and street-improvement bonds.

W. Va., Edgewood.—An election is about to be held, it is reported, to vote on street-improvement bonds.

W. Va., Grafton.—Steps are being taken to issue \$8000 of 5 per cent. Taylor county road bonds. W. M. Felton is secretary Board of Education.

FINANCIAL NOTES.

The Farmers' Union Bank & Trust Co. of Walnut Cove, N. C., is reported to have filed an amendment to its charter increasing its capital from \$12,000 to \$15,000.

The Farmers' Union Bank and the Tipton County Bank, both of Covington, Tenn., will, it is reported, on January 1, be consolidated under the name of the Tipton County Farmers' Union Bank with a capital of \$200,000.

The Bonneau branch of the State Bank of St. Stephens, S. C., is reported to have begun business with G. G. Dowling as cashier.

The Bank of Cabot, Cabot, Ark., is reported to have filed an amendment to its charter increasing its capital from \$10,000 to \$50,000.

Auditor D. L. Thompson of Mississippi, in a report just issued on the condition of 334 State banks in Mississippi at the close of business June 14, 1912, shows that the aggregate resources of the banks were \$74,221,909; paid-in capital, \$13,128,673; surplus, \$3,920,273; undivided profits, \$2,221,981, and individual deposits, \$42,767,112. A dispatch from Jackson, Miss., says that the State Auditor's report for October 24, 1912, shows an increase in total resources of \$3,981,011.

THIRTY-SECOND ANNUAL REPORT
OF
The Chicago, Rock Island & Pacific Railway Co.
Fiscal Year Ended June 30, 1912.

To the Stockholders:

The Board of Directors herewith submit their report of the operations and affairs of the Rock Island Lines for the fiscal year ended June 30, 1912.

The results of the operations for the year were as follows:

Total operating revenue (decrease \$3,774,819.72, or 5.5 per cent.)	\$64,712,853 32
Operating expenses (decrease \$2,296,188.99, or 4.7 per cent.)	46,759,494 01
Net operating revenue (decrease \$1,478,430.73, or 7.6 per cent.)	\$17,953,359 31
Taxes (increase \$44,210.27, or 1.5 per cent.)	2,752,861 23
Operating income	\$15,200,498 08
Miscellaneous income	686,790 83
Total income	\$15,887,288 91
Interest and rentals	12,036,892 99
Balance of income, after providing for all charges, being 5.1 per cent. on capital stock (\$75,000,000.00)	\$3,850,395 92
Dividends paid (5 per cent. on capital stock)	3,743,700 00
Balance surplus for the year	\$106,695 92
For comparative income account in detail, see table below.	

CAPITAL STOCK.

The capital stock outstanding June 30, 1912, was \$74,877,200.00, no change having occurred during the current fiscal year.

FUNDED DEBT.

The funded debt, not including equipment notes, increased \$22,439,000.00 during the period under review, and equipment notes decreased \$1,412,000.00, creating a net increase in the total funded debt of \$21,027,000.00. Details are set forth on pages 19 and 20. (See pamphlet report.)

ROAD AND EQUIPMENT.

The property investment increased \$3,449,579.89 during the year, which figure includes the cost of new equipment purchased under trust agreement or otherwise acquired, and expenditures for additions and betterments. The changes comprising the above amount are shown on pages 17 and 18. (See pamphlet report.)

NEW LINES ACQUIRED.

Under date of October 14, 1911, the Rock Island, Arkansas & Louisiana Railroad Company purchased that portion of the Little Rock & Hot Springs Western Railroad extending from Little Rock, Ark., to Benton, Ark., a distance of 21.97 miles, formerly operated under lease.

On December 1, 1911, the Chicago, Rock Island and Pacific Railway Company leased for a term of nine hundred ninety-nine years the Rock Island & Dardanelle Railway Company, a branch line of railway, extending from Ola, Ark., to Dardanelle, Ark., a distance of 13.93 miles, and has included the mileage, revenues, operating expenses, taxes, etc., in its accounts. By reason of the length of the term of the lease, the mileage is considered owned in figuring all statistics.

NEW EQUIPMENT.

The 60 steel passenger train cars mentioned in last year's report have been received and placed in service.

Orders were also placed during the current fiscal year for 50 locomotives, 2 steel passenger motor cars, 51 steel passenger train cars (including 4 horse cars and 1 business car) and 490 steel underframe freight train cars, of which 10 locomotives and 622 freight train cars have been delivered; the balance, consisting of 40 locomotives, 4318 freight train cars, and 51 steel passenger train cars and two steel passenger motor cars are to be delivered after June 30, 1912.

More complete details are shown on pages 39, 41 and 42. (See pamphlet report.)

CONSTRUCTION OF NEW LINES.

The construction of the St. Paul & Kansas City Short Line Railroad between Carlisle, Iowa, and Alberton, Iowa (mention of which was made in last year's report), is now well under way, about 85 per cent. of the grading and about 80 per cent. of the bridging having been completed at June 30, 1912.

Twenty-two miles of rail had been laid to October 1, 1912, and the laying of the balance is rapidly progressing.

The details of the building of this line are in accordance with the most modern ideas of railroad construction; new ninety-pound rail on cross-ties, with the latest design of rail fastenings; track ballasted with gravel; concrete posts for right-of-way fence; public highways diverted wherever possible, either under or over the rails, etc.

Under date of June 3, 1911, a charter was granted, under the laws of the State of Arkansas, to the Malvern & Camden Railway Company, with authorized capital stock of \$1,200,000.00, of which \$120,000.00 has been issued and is owned by your company.

It is proposed to construct a line of railway, approximately sixty miles long, from the City of Malvern, Hot Spring County, Arkansas, in a southerly direction through the counties of Hot Spring, Dallas and Ouachita to the City of Camden, Ouachita County, Arkansas.

At the close of this fiscal year about 45 per cent. of the grading and bridging was completed. Tracklaying will begin about November 1, 1912.

The line, when completed, will traverse a rich lumber section, and also furnish additional service for the cities of Malvern and Camden, with populations of about three thousand each.

To enable that company to meet its construction obligations, your company has advanced \$297,067.92 to the Malvern & Camden Railway Company.

GENERAL.

The records of the industrial department indicate that one hundred and twenty-eight new industries were located along the Rock Island Lines during the current fiscal year. It is estimated that their construction will cost approximately thirteen million dollars and that their operation will furnish employment for more than five thousand men and create an annual movement of over fifty-four thousand carloads of revenue freight. These industries will also require the movement of considerable less than carload freight.

During the year seventy-three industrial sidetracks were constructed to private industries and four to coal mines, making a total of seventy-seven new tracks. Extensions and rearrangements of tracks were also made to twelve industries and three coal mines.

The policy of improving the terminals of your property has been carried forward during the year. For improving and creating new terminals the sum of \$1,163,955.39 was expended.

Details of the up-keep and improvement of your Company's roadbed and equipment may be found on pages 38 and 39. (See pamphlet report.)

In addition to the above expenditures, \$664,333.08 was advanced to the Arkansas & Memphis Railway Bridge & Terminal Company for the purpose of purchasing a bridge site and land for terminals at Memphis, Tenn., in connection with the construction of a bridge across the Mississippi River at that point.

Advances aggregating \$418,693.23 during the period covered by this report were also made to the Trinity & Brazos Valley Railway Company, covering one-half of the expenditures for additions and betterments, equipment and operating deficit of that company.

In order to promote the safety of employees and patrons and to reduce to a minimum personal injuries, there was organized on August 1, 1912, a safety bureau with jurisdiction over the entire Rock Island Lines. The organization embraces practically every operating official, together with minor officers and employees, and it is hoped that by co-operation of all concerned a large percentage of accidents will be avoided.

Taxes continue to show an increase. The increase for the period under review, compared with the same period last year, was \$44,210.27, or 1.5 per cent. However, in making a five-year comparison, the account shows an increase of \$362,966.44, or 53.80 per cent., while the operated mileage has increased during the same period less than 1 per cent.

At June 30, 1912, one hundred and thirty-three pensioners were on the pension pay rolls, ninety-five employees having been retired by reason of the age limit, and thirty-eight by reason of being incapacitated. The total cost for pensions paid and the expense of administration during the year was \$41,807.30.

In common with other railroads, the gross revenue of your Company decreased, and the expenses of operation increased, as compared with the preceding fiscal year. The almost unparalleled weather conditions during the winter of 1911-1912, and the extraordinary flood conditions in the spring of 1912, during which latter period some forty miles of the track of your Company were under water for a period of more than two weeks, made both for an increase in expenses and decrease in earnings. These conditions, together with the fact that the expenses for the year carry a charge of \$342,000 on account of increased rates of pay in employees' wages, as compared with the preceding year, made it impossible to keep operating expenses down to a level proportionate to the earnings, consequently causing an increase in the operating ratio.

As stated in previous reports, the accounts of your Company are handled in accordance with methods prescribed and enforced by the Interstate Commerce Commission, and are periodically audited by their examiners; therefore, it is deemed unnecessary to have the accounts certified by an independent auditor.

It is a pleasure to acknowledge the loyalty and hearty co-operation of officers and employees.

By order of the Board of Directors.

H. U. MUDGE,

President.

October 21, 1912.

ROCK ISLAND LINES.

CONDENSED GENERAL BALANCE SHEET, JUNE 30, 1912, AND COMPARISON WITH PREVIOUS YEAR.

		<i>Assets.</i>			
		1912.	1911.	Increase.	Decrease.
Property Investment—					
Road and Equipment:					
Investment to June 30, 1907	\$255,585,343 24	\$255,585,343 24			
Investment since June 30, 1907	31,610,476 77	28,160,896 88	\$3,449,579 89		
Reserve for accrued depreciation—credit	699,043 31	770,418 86		\$138,424 45	
Total road and equipment	\$286,586,776 70	\$283,275,621 26	\$3,311,155 44		
Securities:					
Securities of proprietary, affiliated and controlled companies—pledged		180,233 16	99,504 00	80,729 16	
Securities of proprietary, affiliated and controlled companies—unpledged		7,044,138 42	8,966,521 52		\$1,922,383 10
Other Investments:					
Advances to proprietary, affiliated and controlled companies for construction, equipment and betterments		8,873,117 75	7,041,287 21	1,831,830 54	
Miscellaneous investments		2,471,173 52	2,258,858 07	212,315 45	
Total property investment	\$305,155,441 55	\$301,641,792 06	\$3,513,649 49		
Working Assets:					
Cash	\$15,073,939 94	\$3,241,991 16	\$11,831,948 78		
Securities issued or assumed—held in treasury	557,458 23	4,738 23	552,700 00		
Marketable securities	15,946,140 08	15,955,932 87		\$9,792 79	
Loans and bills receivable	484,567 43	458,522 76	28,044 67		
Traffic and car-service balances due from other companies	652,253 82	398,354 26	253,899 56		
Net balance due from agents and conductors	1,058,584 79	1,041,406 29	17,178 50		
Miscellaneous accounts receivable	3,284,397 25	3,222,814 22	61,583 03		
Materials and supplies	5,934,979 99	5,813,008 49	121,971 50		
Other working assets	1,845,871 15	1,387,350 35	458,520 80		
Total working assets	\$44,838,192 68	\$31,522,138 54	\$13,316,054 14		
Accrued Income Not Due:					
Unmatured interest, dividends and rents receivable		\$656,656 94	\$507,640 25	\$149,016 69	
Deferred Debit Items:					
Advances	\$2,799,127 71	\$1,864,213 75	\$934,913 96		
Rents and insurance paid in advance	33,772 60	56,479 94		\$22,707 34	
Special deposits	227,610 98	417,822 86		190,211 88	
Other deferred debit items	1,198,571 28	1,213,553 53		14,982 25	
Total deferred debit items	\$4,259,082 57	\$3,551,876 08	\$707,206 49		
Grand total	\$354,909,373 74	\$337,223,446 93	\$17,685,926 81		

Note.—In stating the assets and liabilities of the companies forming the Rock Island Lines, the holdings of The Chicago, Rock Island and Pacific Railway Company in the bonds and capital stock of the auxiliary lines, together with loans between the various companies, have been eliminated from the liabilities and a like reduction made in the assets pertaining thereto; the figures shown, therefore, represent the book value of the assets and the liabilities without duplication.

Liabilities.

		1912.	1911.	Increase.	Decrease.
Stock:					
Capital stock	\$75,000,000 00	\$75,000,000 00			
Mortgage, Bonded and Secured Debt:					
Funded debt	\$51,189,000 00	\$30,162,000 00	\$21,027,000 00		
Total capital liabilities	\$326,189,000 00	\$305,162,000 00	\$21,027,000 00		
Working Liabilities:					
Traffic and car-service balances due to other companies		\$917,315 51	\$940,932 30		\$23,586 79
Audited vouchers and wages unpaid		3,703,690 95	5,042,603 29		1,338,912 34
Miscellaneous accounts payable		292,048 29	239,813 50	\$52,234 79	
Matured interest, dividends and rents unpaid		2,235,041 25	1,980,352 26	254,688 99	
Matured mortgage, bonded and secured debt unpaid		23,000 00	23,000 00		
Working advances due to other companies		190,620 30	213,101 29		22,480 99
Other working liabilities		1,002,748 53	818,638 44	184,110 09	
Total working liabilities	\$8,364,494 83	\$9,258,441 08		\$893,946 25	
Accrued Liabilities Not Due:					
Unmatured interest, dividends and rents payable		\$2,425,223 42	\$1,872,923 87	\$552,299 55	
Taxes accrued		1,317,869 45	1,371,588 74		\$53,719 29
Total accrued liabilities not due	\$3,743,092 87	\$3,244,512 61	\$498,580 26		
Deferred Credit Items:					
Operating reserves		\$1,007,518 39	\$952,868 86	\$54,649 53	
Other deferred credit items		942,215 92	1,532,953 93		\$590,738 01
Total deferred credit items	\$1,949,734 31	\$2,485,822 79		\$536,088 48	
Grand total liabilities	\$340,246,922 01	\$320,150,776 48	\$20,096,145 53		
Appropriated Surplus:					
Additions to property since June 30, 1907, through income		64,367 76	64,367 76		
Profit and Loss:					
Balance	\$14,598,083 97	\$17,008,302 69		\$2,410,218 72	
Grand total	\$354,909,373 74	\$337,223,446 93	\$17,685,926 81		

PROFIT AND LOSS.

Credit balance, June 30, 1911	\$17,008,302 69
Surplus for year ended June 30, 1912	\$106,695 92
Interest prior to current fiscal year on advances for construction	13,884 93
Profit on purchase of scrip and warrants used in payment of taxes	2,623 55
Sundry adjustments not affecting current year's income	69,249 72
	\$192,194 12
Less:	
Loss on securities and land sold	\$81,104 29
Losses through failures of railroads and individuals	50,039 43
Unextinguished discount on securities	1,637,500 00
Miscellaneous adjustments	118,789 01
	\$1,887,432 73
Depreciation on:	
Trucks removed	\$51,263 17
Structures sold, removed or destroyed	29,725 55
Equipment sold, dismantled or destroyed	633,991 39
	714,980 11
	2,602,412 84
	2,410,218 72
Credit balance, June 30, 1912	\$14,598,083 97

ROCK ISLAND LINES—INCOME ACCOUNT, YEAR ENDED JUNE 30, 1912, COMPARED WITH PREVIOUS YEAR.

	1911-12. 8,055,84	1910-11. 8,026,09	Increase.		Decrease.	
			Amount.	P. ct.	Amount.	P. ct.
Average mileage operated.....			9.75	.12		
Revenue from transportation:						
Freight.....	\$41,156,834 72	\$43,368,395 66			\$2,211,560 94	5.10
Passenger.....	18,609,408 36	20,240,528 03			1,631,119 67	8.06
Mail.....	1,602,209 29	1,577,219 40	\$24,989 89	1.58		
Express.....	2,014,386 03	2,053,549 44			39,163 41	1.91
Miscellaneous.....	873,417 38	890,107 57	73,393 81	9.16		
Total transportation revenue.....	\$64,256,255 78	\$68,039,800 10			\$3,783,544 32	5.56
Revenue from operations other than transportation.....	456,597 54	447,672 94	8,924 60	1.99		
Total operating revenue.....	\$64,712,853 32	\$68,487,473 04			\$3,774,619 72	5.51
Operating expenses:						
Maintenance of way and structures.....	\$8,493,345 86	\$9,738,015 96			\$1,244,670 10	12.78
Maintenance of equipment.....	8,392,406 70	9,359,748 70			1,067,342 00	11.26
Traffic expenses.....	1,981,398 97	2,007,149 52			25,750 55	1.28
Transportation expenses.....	26,210,502 08	26,171,418 77	\$39,083 31	.15		
General expenses.....	1,771,780 40	1,779,350 65			7,569 65	.43
Total operating expenses.....	\$46,759,494 01	\$49,055,683 00			\$2,296,188 99	4.68
Net operating revenue.....	\$17,953,359 31	\$19,431,790 04			\$1,478,430 73	7.60
Taxes.....	2,752,861 23	2,708,650 96	\$44,210 27	1.63		
Operating income.....	\$15,200,498 08	\$16,723,139 08			\$1,522,641 00	9.10
Outside operations (debit balance).....	\$196,976 63	\$115,725 63			\$81,251 00	70.21
Hire of equipment (debit balance).....	990,827 67	1,273,767 61	\$282,939 94	22.21		
Other income.....	1,874,585 13	1,574,970 39	299,614 83	19.03		
Total.....	\$686,790 83	\$185,477 06	\$501,313 77	270.28		
Total income.....	\$15,887,288 91	\$16,908,616 14			\$1,021,327 23	6.04
Interest.....	\$10,492,134 63	\$9,741,852 72	\$750,281 91	7.70		
Rentals.....	1,544,758 36	1,704,925 05			\$160,166 69	9.29
Betterments on leased lines.....		19,124 71			19,124 71	100.00
Total charges.....	\$12,036,892 99	\$11,465,902 48	\$570,990 51	4.98		
Balance of income (available for dividends).....	\$3,850,395 92	\$5,442,713 66			\$1,592,317 74	29.26
Dividends.....	3,743,700 00	3,930,948 00			187,188 00	4.76
Balance surplus (carried to credit of profit and loss).....	\$106,695 92	\$1,511,765 66			\$1,405,129 74	92.95

DIVIDENDS DECLARED DURING YEAR ENDED JUNE 30, 1912.

Dividend No. 125, 1 1/4 per cent., paid September 30, 1911.....	\$935,940 00
Dividend No. 126, 1 1/4 per cent., paid December 30, 1911.....	748,752 00
Dividend No. 127, 1 1/4 per cent., paid March 30, 1912.....	935,940 00
Dividend No. 128, 1 1/4 per cent., paid June 30, 1912.....	1,123,128 00
Total, 5 per cent.....	\$3,743,760 00

ROCK ISLAND LINES.

FINANCIAL CHANGES DURING YEAR ENDED JUNE 30, 1912.

Resources:	
Cash on hand June 30, 1911.....	\$3,241,991 16
Funded debt increased (page 30, see pamphlet report).....	\$21,027,690 00
Securities of proprietary, affiliated and controlled companies—unpledged decrease.....	1,922,383 10
	\$22,949,983 10
Changes in working, accrued and deferred accounts, as follows:	
Decrease in Assets:	
Marketable securities.....	\$9,792 79
Rents and insurance paid in advance.....	22,707 34
Special deposits.....	190,011 88
Other deferred debit items.....	14,988 25
	\$237,500 26
Increase in Liabilities:	
Miscellaneous accounts payable.....	\$52,234 79
Matured interest, dividends and rents unpaid.....	254,688 98
Other working liabilities.....	184,110 09
Unmatured interest, dividends and rents payable.....	552,299 55
Operating reserves.....	54,649 53
	1,097,982 95
	\$1,335,483 21
Less Increase in Assets:	
Securities issued or assumed—held in treasury.....	\$552,790 00
Loans and bills receivable.....	28,044 67
Traffic and car-service balances due from other companies.....	253,890 54
Net balance due from agents and conductors.....	17,178 50
Miscellaneous accounts receivable.....	61,583 03
Materials and supplies.....	121,971 59
Other working assets.....	458,520 80
Unmatured interest, dividends and rents receivable.....	149,016 69
Advances.....	934,913 96
	\$2,577,828 80
Decrease in Liabilities:	
Traffic and car-service balances due to other companies.....	\$23,586 79
Audited vouchers and wages unpaid.....	1,338,912 34
Working advances due to other companies.....	22,480 39
Taxes accrued.....	63,719 29
Other deferred credit items.....	590,738 01
	\$2,029,437 42
	4,607,266 22
	\$2,271,783 01
Total to be accounted for.....	\$22,930,191 25
Applied as follows:	
Investment since June 30, 1907 (increase)—additions and betterments, additional equipment, etc., as per details in table below.....	\$3,449,579 89
Reserve for accrued depreciation—credit.....	138,424 45
	\$3,588,004 34
Securities of proprietary, affiliated and controlled companies—pledged (increase).....	90,729 16
Advances to proprietary, affiliated and controlled companies for construction, equipment and betterments (increase).....	1,831,830 54
Miscellaneous investments.....	212,317 45
Net debit to profit and loss.....	2,110,218 72
	7,846,251 31
Balance, cash on hand June 30, 1912.....	\$15,073,939 94

ROAD AND EQUIPMENT—(INVESTMENT SINCE JUNE 30, 1907—CHANGES DURING YEAR ENDED JUNE 30, 1912.

Balance, June 30, 1911, as per balance sheet.....	\$28,160,886 88
Changes during the year:	
Additions:	
Additions and betterments, current year (not including equipment—see page 18 (pamphlet report)).....	\$3,282,493 30
Expenditures for additional and improved equipment:	
Converting coal-burning locomotives into oil-burners.....	\$13,523 66
Freight inspection and miscellaneous charges in connection with purchase of new ballast cars.....	7,730 88
Converting steam shovel 95256 into derrick car.....	996 73
New appliances for existing equipment, required by Federal and State laws.....	26,133 70
Other new appliances for existing equipment.....	16,105 65
Silverware for dining and cafe cars.....	2,322 44
	67,723 07
Total additions and betterments (as per page 18, pamphlet report).....	\$3,350,216 37
Acquisition of Little Rock & Hot Springs Western Railroad by Rock Island, Arkansas & Louisiana Railroad Co.....	453,000 00
Acquisition of property of Malvern & Camden Railway property of Rock Island, Arkansas & Louisiana Railroad Co.....	297,007 92
Additions and betterments on leased lines.....	20,199 28
Bankers' Trust Co. of New York, equipment purchase under indenture of August 1, 1911.....	402,431 93
Disbursement for old construction liabilities of Rock Island, Arkansas & Louisiana Railroad Co.....	1,217 67
Net adjustment of charges, Yarnall, Texas, to Amarillo, Texas, line.....	2,535 44
	\$4,527,468 61
Deductions:	
Bankers' Trust Co. of New York, equipment purchase under indenture of May 2, 1910—Credit from material furnished equipment building.....	\$253,559 82
Reserve for replacement of destroyed equipment which, under mortgages or equipment trust agreements, must be replaced.....	31,236 77
Value of equipment destroyed, dismantled or sold during the past fiscal year (exclusive of equipment which, under mortgages or equipment trust agreements must be replaced). Such value, less salvage, was charged to operating expenses and profit and loss.....	790,940 00
Net amount of miscellaneous adjustments covering equipment purchased under car trust agreements, prior to the current fiscal year.....	2,122 13
Sale of lots eight and nine in block seven, Quitman, La. (property of Rock Island, Arkansas & Louisiana Railroad Co.).....	30 00
	1,077,888 72
Net increase.....	3,449,579 89
Balance, June 30, 1912, as per balance sheet.....	\$31,610,476 77
FUNDED DEBT CHANGES DURING YEAR ENDED JUNE 30, 1912.	
Funded debt, including equipment notes, June 30, 1911:	
Funded debt.....	\$215,117,000 00
Equipment notes.....	15,045,000 00
Total.....	\$230,162,000 00
This has been changed during the year as follows:	
Funded Debt Increased:	
By the issue of The Chicago, Rock Island & Pacific Railway Co.'s first and refunding mortgage gold bonds, viz.:	
For additions and betterments (including equipment), 1912 fund.....	\$2,500,000 00
For an equal amount of general mortgage gold bonds, issued January 1, 1912, for additions and betterments, said general mortgage gold bonds having been deposited with trustees of first and refunding gold bond mortgage.....	1,000,000 00
	\$3,500,000 00
By the issue of The Chicago, Rock Island & Pacific Railway Co.'s twenty-year gold debenture five per cent. bonds.....	20,000,000 00
By the issue of Rock Island, Arkansas & Louisiana Railroad Co.'s Hot Springs Western four per cent notes.....	453,600 00
	\$23,953,600 00
Less:	
By the redemption of matured obligations as follows:	
The Chicago, Rock Island & Pacific Railway Co.'s gold bonds of 1902, matured May 1, 1912.....	\$1,494,000 00
Little Rock Bridge Co.'s bonds, matured June 1, 1912.....	20,000 00
	1,514,000 00
	\$22,439,600 00
Equipment Notes Decreased:	
By the redemption of matured obligations as follows:	
The Chicago, Rock Island & Pacific Railway Co.'s equipment 4 1/2 per cent. gold notes, matured as follows:	
August 1, 1911.....	\$325,000 00
February 1, 1912.....	325,000 00
	\$650,000 00
The Chicago, Rock Island & Pacific Railway Co.'s equipment series B 6 per cent. notes, matured as follows:	
October 15, 1911.....	\$60,000 00
April 15, 1912.....	60,000 00
	120,000 00
The Chicago, Rock Island & Pacific Railway Co.'s equipment series C 4 1/2 per cent. gold bonds, matured as follows:	
October 1, 1911.....	\$265,000 00
April 1, 1912.....	265,000 00
	530,000 00
The Chicago, Rock Island & Pacific Railway Co.'s equipment series D 4 1/2 per cent. gold bonds, matured as follows:	
November 1, 1911.....	\$225,000 00
May 1, 1912.....	225,000 00
	450,000 00
The Chicago, Rock Island & Pacific Railway Co.'s equipment series E 5 per cent. gold notes, matured as follows:	
July 1, 1911.....	\$5,000 00
January 1, 1912.....	5,000 00
	10,000 00
	\$1,760,000 00
Less:	
*By the issue of The Chicago, Rock Island & Pacific Railway Co.'s 4 1/2 per cent. equipment gold notes, series F.....	348,000 00
Net decrease in equipment notes.....	1,412,000 00
Net increase in funded and other fixed interest-bearing debt.....	21,027,000 00
Funded debt, including equipment notes, June 30, 1912:	
Funded debt (page 29, pamphlet report).....	\$237,536,000 00
Equipment notes (page 29, pamphlet report).....	13,673,000 00
Total.....	\$251,189,000 00
*Authorized and issued \$360,000.00, of which \$12,000.00 were redeemed February 1, 1912.	

SECURITIES OWNED JUNE 30, 1912.

In Property Investment.

Included in securities of proprietary, affiliated and controlled companies—pledged and unpledged:

	Face value.	Book value.
Stocks—Railroads:		
Calumet Western Railway Co.	\$106,400 00	
Cedar Rapids, Iowa Falls & Northwestern Railway Co.	604,500 00	
Kankakee & Seneca Railroad Co.	5,000 00	
Kansas City, Rock Island & Pacific Railway Co. (\$38,500,000 pledged)	40,000 00	
Keokuk & Des Moines Railway Co., preferred	575,100 00	
Keokuk & Des Moines Railway Co., common	1,487,900 00	
Peoria & Bureau Valley Railroad Co.	10,000 00	
Rock Island & Dardanelle Railway Co.	100,000 00	
St. Paul & Des Moines Railroad Co.	2,700 00	
St. Paul & Kansas City Short Line Railroad Co.	50,000 00	
Stocks—Union depot, terminal, stock yards and coal companies:		
Arkansas & Memphis Railway Bridge & Terminal Co.	10,000 00	
Atchison Union Depot & Railroad Co.	9,000 00	
Iowa Transfer Railway Co.	6,800 00	
Joliet Union Depot Co.	25,000 00	
Kansas City Terminal Railway Co. (\$30,500,000 pledged)	100,000 00	
Keokuk Union Depot Co.	20,000 00	
Leavenworth Depot & Railway Co.	25,000 00	
Minnesota Transfer Railway Co.	7,000 00	
Morris Terminal Railway Co.	50,000 00	
Peoria Railway Terminal Co.	500,000 00	
Peoria Union Depot & Railroad Co.	8,120 00	
Rock Island Frisco Terminal Railway Co. (pledged)	300,000 00	
St. Joseph Union Depot Co.	2,000 00	
St. Louis, Rock Island Terminal Railway Co. (\$11,300,000 pledged)	12,000 00	
St. Paul Union Depot Co.	103,600 00	
Terminal Railroad Association of St. Louis	205,800 00	
Union Terminal Railway Co., St. Joseph, Mo. (pledged)	125,000 00	
Wichita Union Terminal Railway Co.	25,000 00	
Funded Debt—Railroads:		
Kankakee & Seneca Railroad Co.	325,000 00	
Rock Island & Dardanelle Railway Co.	100,000 00	
Trinity & Brazos Valley Railway Co. certificate of indebtedness	2,330,377 85	
Funded Debt—Union depot, terminal, stock yards and coal companies:		
Atchison Union Depot & Railroad Co.	3,500 00	
Minnesota Transfer Railway Co.	54,000 00	
Peoria Railway Terminal Co. (first mortgage)	1,500 00	
Peoria Railway Terminal Co. (first and refunding mortgage)	1,169,000 00	
Rock Island Improvement Co. (\$2,700,000 pledged)	3,931,318 93	
Rock Island Improvement Co., equipment series A.	665,000 00	
Rock Island Improvement Co., equipment series B.	730,000 00	
Total	\$13,825,616 78	\$7,224,371 58

Included miscellaneous investments:

	Face value.	Book value.
Stocks:		
Coal Valley Mining Co.	\$50,000 00	
Chicago Union Transfer Railway Co., common	40,000 00	
Chicago Union Transfer Railway Co., preferred	40,000 00	
Consolidated Indiana Coal Co.	2,400,000 00	
Crawford County Mining Co.	100,000 00	
Diering Coal Co.	1,700,000 00	
Gasconade Railway Construction Co. (pledged)	50,000 00	
Gulf Construction Co.	25,000 00	
Memphis Railroad Terminal Co.	50,000 00	
Missouri & Illinois Bridge & Belt Railroad Co.	10,000 00	
Rock Island Coal Mining Co.	10,000 00	
St. Joseph Stock Yards & Terminal Co.	12,500 00	
Union Stock Yards Co., Topeka, Kans.	13,100 00	
Western Coal & Mining Co.	36,000 00	
Funded Debt:		
Chicago Transfer & Clearing Co., judgment note trust certificate	98,000 00	
Total	\$4,648,200 00	\$828,964 14
Total in property investment	\$18,473,816 78	\$8,053,335 72
* \$200,000 owned jointly with The Chicago & Alton Railroad Co.		

TOTAL OPERATING REVENUE, OPERATING EXPENSES, NET OPERATING REVENUE AND AMOUNT OF EACH PER MILE OF ROAD OPERATED FOR THE TEN YEARS ENDED JUNE 30, 1912.

Year.	Average mileage operated.	Total operating revenue.	Operating expenses.	Net operating revenue.	Ratio of operating expenses to operating revenue.	Per mile of road.	Net operating revenue.
1903.	6,978.43	\$44,376,619 11	\$28,059,164 05	\$16,317,455 26	63.25	\$6,359 11	\$4,020 84
1904.	7,205.14	44,969,491 42	31,774,893 29	13,194,598 13	70.66	6,241 31	4,410 03
1905.	7,231.91	44,051,503 14	31,058,309 26	12,993,293 88	70.50	6,091 27	4,294 61
1906.	7,218.97	51,237,858 05	35,067,058 55	16,170,799 50	68.41	7,098 55	4,858 23
1907.	7,780.26	49,138,673 28	40,812,822 44	16,325,850 84	67.86	7,229 65	5,245 69
1908.	7,969.53	58,484,196 88	42,134,179 97	16,348,016 91	72.05	7,338 48	5,287 16
1909.	8,026.38	61,184,886 95	42,513,495 41	18,671,391 54	69.48	7,822 97	5,394 72
1910.	8,043.59	66,220,578 94	48,089,368 91	18,131,210 03	72.59	8,232 71	5,976 11
1911.	8,026.09	68,487,473 04	49,055,683 00	19,431,790 04	71.63	8,533 11	6,112 03
1912.	8,035.84	64,712,853 32	46,759,494 01	17,953,359 31	72.26	8,053 03	5,818 87

CONDENSED INCOME ACCOUNT FOR THE TEN YEARS ENDED JUNE 30, 1912.

Year.	Average mileage operated.	Gross income.	Operating expenses and all other deductions from income other than interest.	Net income.	Interest on funded debt, equipment notes and other notes.	Surplus applicable to dividends.	Less dividends declared.	Balance of income.
1903.	6,978.43	\$46,048,107 11	\$30,419,009 21	\$15,629,097 90	\$6,056,186 39	\$9,572,911 51	\$4,680,766 50	\$4,892,145 01
1904.	7,205.14	46,303,325 07	34,263,605 07	12,039,720 00	6,011,521 68	6,028,198 32	5,985,000 00	43,138 32
1905.	7,231.91	45,577,681 03	33,748,476 01	11,829,205 02	7,096,065 85	4,733,109 17	4,676,622 00	56,487 17
1906.	7,218.97	51,237,858 05	35,067,058 55	14,334,901 50	7,749,169 72	6,785,832 04	4,677,552 50	2,108,279 54
1907.	7,780.26	49,138,673 28	40,812,822 44	17,028,817 84	8,279,390 02	8,750,517 07	4,116,728 00	4,633,789 07
1908.	7,969.53	58,484,196 88	42,134,179 97	16,350,016 91	8,413,221 92	7,936,794 99	3,929,765 00	788,317 41
1909.	8,026.38	61,184,886 95	42,513,495 41	18,671,391 54	8,861,223 05	6,166,230 74	2,930,018 75	2,236,211 99
1910.	8,043.59	66,220,578 94	48,089,368 91	18,131,210 03	9,129,874 61	4,747,881 08	2,743,272 00	1,004,609 08
1911.	8,026.09	68,487,473 04	49,055,683 00	19,431,790 04	9,741,852 72	5,442,713 66	3,930,948 00	1,511,765 66
1912.	8,035.84	64,712,853 32	46,759,494 01	14,342,359 35	10,492,134 63	3,850,395 92	3,743,760 00	106,635 92

SUMMARY OF REVENUE FREIGHT AND PASSENGER TRAFFIC FOR TEN YEARS ENDED JUNE 30, 1912.

REVENUE FREIGHT TRAFFIC.					Average per ton.					Average load in tons.				
Year.	Average mileage operated.	Number.	Tons carried.	Revenue.	Distance.	Rate per mile, cents.	Per train mile.	Per loaded car mile.	Per empty car mile.	Per train mile.	Per loaded car mile.	Per empty car mile.	Per train mile.	Per loaded car mile.
1903.	6,978.43	13,390,888	2,987,577,497	\$30,917,281 10	224.61	1.04	189.13	13.45	9.39	39.58	8.42	10.40	39.58	8.42
1904.	7,205.14	13,567,817	3,250,750,267	31,167,008 12	233.59	0.96	225.48	14.53	10.10	39.74	8.42	10.40	39.74	8.42
1905.	7,231.91	13,515,367	3,171,456,832	29,062,386 08	244.66	0.94	228.04	14.06	9.87	39.74	8.42	10.40	39.74	8.42
1906.	7,218.97	15,394,286	3,719,692 55	31,606,822 88	241.56	0.93	215.19	14.54	10.38	39.74	8.42	10.40	39.74	8.42
1907.	7,780.26	17,412,333	4,281,228,265	40,215,901 41	245.87	0.94	236.17	15.37	10.85	39.74	8.42	10.40	39.74	8.42
1908.	7,969.53	15,877,646	4,019,704,681	37,899,356 36	253.17	0.94	254.77	15.37	10.85	39.74	8.42	10.40	39.74	8.42
1909.	8,026.38	17,445,657	4,160,828,170	39,158,053 10	242.68	0.94	264.55	15.15	10.87	39.74	8.42	10.40	39.74	8.42
1910.	8,043.59	19,167,179	4,567,089,284	42,218,880 84	238.28	0.92	257.43	15.07	10.73	39.74	8.42	10.40	39.74	8.42
1911.	8,026.09	19,118,358	4,718,460,846	43,368,385 66	246.50	0.92	266.66	14.92	10.49	39.74	8.42	10.40	39.74	8.42
1912.	8,035.84	18,969,251	4,599,242,133	41,156,834 72	242.46	0.95	277.81	15.11	10.83	39.74	8.42	10.40	39.74	8.42

REVENUE PASSENGER TRAFFIC.

Year.	Average mileage operated.	Number.	Passengers carried.	Revenue.	Distance.	Average per passenger.	Average number of passengers.
1903.	6,978.43	10,995,130	512,094,475	\$11,490,543 53	48.33	2.24	39.58
1904.	7,205.14	11,536,847	514,108,832	11,697,033 15	44.56	2.28	39.74
1905.	7,231.91	12,065,685	552,903,897	12,050,781 44	45.82	2.18	40.52
1906.	7,218.97	13,721,273	616,166,553	13,917,030 64	47.09	2.15	43.77
1907.	7,780.26	15,382,339	725,233,506	16,153,539 42	47.15	2.23	42.77
1908.	7,969.53	16,960,747	881,931,444	16,693,110 45	52.00	1.89	52.10
1909.	8,026.38	18,026,284	952,679,066	17,883,378 99	50.83	1.88	55.34
1910.	8,043.59	19,137,409	1,016,355,259	19,378,174 27	50.47	1.91	54.31
1911.	8,026.09	19,842,167	1,010,037,752	19,240,528 02	50.90	1.90	54.91
1912.	8,035.84	18,927,146	939,391,381	18,608,408 36	49.63	1.93	49.21

*The figures in this column prior to 1910 differ slightly from those published in previous reports, the figures in previous reports having been computed without including mixed train miles.

†From July 1, 1902, to June 30, 1903, these figures are average number of passengers per car mile in all passenger train cars, the figures for average number of passengers per car mile in cars carrying passengers not being available.

SECOND ANNUAL REPORT OF THE Norfolk Southern Railroad Co.

FISCAL YEAR ENDED JUNE 30, 1912.

Norfolk, Va., September 15, 1912.

To the Stockholders of the Norfolk Southern Railroad Company:

The Board of Directors submit the following report of the operations of the Company for the year ended June 30, 1912:

INCOME STATEMENT.

	1912.	1911.	Increase.	Decrease.
Mileage operated.....	608.06	607.70	.36	
Total operating revenue.....	\$3,284,824 17	\$2,965,670 75	\$329,153 42	
Total operating expenses.....	2,079,324 36	1,833,292 94	246,031 42	
Net operating revenue.....	\$1,205,499 81	\$1,122,377 81	\$83,122 00	
Outside operation.....	Net-Def. 8,794 99	1,324 63		\$10,119 62
Net revenue.....	\$1,196,704 82	\$1,123,702 44	\$73,002 38	
Taxes accrued.....	90,033 77	70,983 93	19,049 84	
Operating income.....	\$1,106,671 05	\$1,052,718 51	\$53,952 54	
Other income.....	54,576 06	66,780 94		\$12,204 88
Gross corporate income.....	\$1,161,247 11	\$1,119,499 45	\$41,747 66	
Rents accrued lease of road.....	\$98,460 41	\$94,598 03	\$3,862 38	
Interest accrued on Funded Debt.....	463,169 94	411,753 10	51,416 84	
Other deductions.....	11,522 91	2,698 21	8,824 70	
Total deductions.....	\$573,142 96	\$509,049 34	\$64,093 62	
Net corporate income.....	\$588,104 15	\$610,450 11		\$22,345 96
Dividends.....	320,000 00	240,000 00	\$80,000 00	
Surplus.....	\$268,104 15	\$370,450 11		\$102,345 96

ACQUISITION AND COMPLETION OF ADDITIONAL LINES OF RAILROAD.

During the fiscal year the Company acquired all the capital stock of the Raleigh, Charlotte & Southern Railway Company, in which Company were vested the properties and franchises formerly owned by the Raleigh & Southport Railway Company, Sanford & Troy Railroad Company, Durham & Charlotte Railroad Company, Aberdeen & Asheboro Railroad Company, and a leasehold interest in the Carthage & Pinehurst Railroad.

Since the close of the fiscal year the Company has acquired the physical properties of the Raleigh, Charlotte & Southern Railway Company, which gives it a line of road from Raleigh to Fayetteville, Colon to Mt. Gilead and Troy, Asheboro to Aberdeen and to Pinehurst, with 22 miles under construction from Varina to Colon, a total mileage of 228.15.

A contract has been let for the extension of these lines from Mt. Gilead to Charlotte, N. C., a distance of about 53 miles. Upon the completion of this work the Company will have a direct line from Norfolk, Va., one of the most important commercial ports on the Atlantic Coast, to Charlotte, N. C., the largest city in North Carolina.

Your directors believe that the acquisition and construction of these lines of road will greatly increase the value of your property by reason of its wider field of activity and the increased tonnage which will move over the Company's main line from Raleigh, N. C., to Norfolk, Va.

THE FUNDED DEBT.

On February 1, 1912, \$6,000,000 par value three-year 5 per cent. Collateral Gold Notes, dated January 1, 1912, were issued and sold to provide funds for the acquisition and completion of the above additional lines of road and for the purchase of additional equipment. \$544,000 par value of these notes were cancelled on May 24, and a like amount par value of Norfolk Southern Railroad Company's First and Refunding Bonds were issued and sold to reimburse the Company for its purchase of five new locomotives and 500 new box cars. The amount of outstanding First and Refunding Bonds as of June 30, 1912, was \$6,381,000 as compared with \$5,837,000 for the previous year.

The following is a statement of the Funded Debt of the Company as of June 30, 1912:

Classes of Bonds.	Principal Due.	Rate of Interest.	*Principal Outstanding June 30, 1912.
N. & S. R. R. 1st Mortgage.....	1941	5%	\$1,655,000 00
N. & S. R. R. 1st General Mortgage.....	1954	5%	825,000 00
S. & C. Ry. 1st Consolidated Mortgage.....	1952	5%	650,000 00
N. & S. R. R. 1st and Refunding Mortgage.....	1961	5%	6,381,000 00
Total.....			\$9,511,000 00
N. S. R. R. Collateral Trust Gold Notes.....	1915	5%	\$5,456,000 00
Total.....			\$14,967,000 00

*Exclusive of Bonds owned by this Company.

DIVIDENDS.

Regular quarterly dividends of one-half of one per cent. each were declared during the year out of the earnings for the quarters ending September 30 and December 31, 1911, March 31 and June 30, 1912, respectively.

MILEAGE.

Miles of road operated as of June 30, 1912:	Main Line.	2d Track.	Sidings.	Total.
Electric Division, Owned.....	45.06	9.29	9.82	64.17
Steam Divisions, Owned.....	462.97		85.43	548.40
Steam Divisions, Leased.....	35.00		22.19	117.49
Total.....	603.03	9.29	117.44	730.06

Total mileage of Main Line trackage rights:	
Norfolk, Electric Division, Virginia Railway & Power Co.....	.87
Norfolk, Electric Division and Steam, Norfolk Terminal Co.....	.36
Norfolk, Steam Division, Virginian Railway.....	2.30
Raleigh, Steam Division, Seaboard Air Line.....	.60
Goldsboro, Steam Division, Southern.....	.50
Goldsboro, Steam Division, Union Station.....	.40
Total.....	5.03
Grand Total Main Line mileage operated as of June 30, 1912.....	608.06

The average number of miles of single track operated during the past fiscal year was 607.70 as compared with 607.49 for the previous year. There was an increase of 4.27 miles of sidetrack.

OPERATING REVENUES AND EXPENSES.

The revenues and expenses for the year ended June 30, 1912, as compared with the previous year, were as follows:

Operating Revenues.	1912.	1911.	Increase or Decrease.	Per Cent.
Freight.....	\$2,189,690 29	\$1,997,602 63	\$192,087 66	9.6
Passenger.....	844,250 71	758,850 28	85,399 43	11.3
Miscellaneous Passenger Train Revenue.....	15,631 52	8,776 86	6,854 66	78.1
Mail.....	41,659 84	41,608 27	51 57	.1
Express.....	68,633 88	57,474 25	11,159 63	19.4
Other Transportation Revenue.....	67,368 43	42,775 86	24,592 57	57.4
Other Revenue from Operation.....	57,679 50	48,576 60	9,102 90	18.7
Total Operating Revenues.....	\$3,284,824 17	\$2,965,670 75	\$329,153 42	11.1

Operating Expenses.

	1912.	1911.	Increase or Decrease.	Per Cent.
Maintenance of Way and Structure.....	\$394,142 26	\$345,651 09	\$48,491 16	14.
Maintenance of Equipment.....	394,780 57	345,770 20	49,010 37	14.1
Traffic Expenses.....	66,807 78	59,904 78	6,903 00	11.5
Transportation Expenses.....	1,062,837 02	921,516 69	141,320 33	15.3
General Expenses.....	160,756 74	160,450 18	306 56	.2
Total Operating Expenses.....	\$2,079,324 36	\$1,833,292 94	\$246,031 42	13.4
Net Operating Revenue.....	\$1,205,499 81	\$1,122,377 81	\$83,122 00	7.4
Outside Operations.....	Def. 8,794 99	1,324 63		D 10,119 62
Net Revenue.....	\$1,196,704 82	\$1,123,702 44	\$73,002 38	6.5
Taxes Accrued.....	\$90,033 77	\$70,983 93	\$19,049 84	26.8
Operating Income.....	\$1,106,671 05	\$1,052,718 51	\$53,952 54	5.1
Ratio of Operating Expenses to Operating Revenues.....	63 30	62 03	I	1 27
Ratio of Operating Expenses and Taxes to Operating Revenues.....	66 04	64 43	I	1 61

The operation of the property of the Company was materially affected during the months of December, 1911, and January, February and March, 1912, by the almost unprecedented adverse weather conditions, causing a reduction in the general revenues and increasing the expense of operation and maintenance.

TRAFFIC.

The gross operating revenues per mile of road for the past fiscal year in comparison with previous years were as follows:

	1912.	1911.	1910.	1909.	1908.
\$5,402 14	\$4,863 70	\$4,467 06	\$4,155 47	\$3,915 71	

The statistics of traffic handled for the past fiscal year in comparison with the previous year show the following results:

The number of tons of freight carried increased.....	4.1%
The number of tons of freight carried one mile increased.....	8.1%
The average distance each ton of freight was hauled increased.....	3.8%
The average number of tons per loaded car mile increased.....	1.1%
The average revenue from each ton of freight hauled increased.....	7c.
The average revenue per freight train mile increased.....	5.3%
The number of passengers carried increased.....	11.9%
The number of passengers carried one mile increased.....	6.4%
The number of passengers per train mile increased.....	6.4%
The average passenger-train revenue per train mile increased.....	11.1%

MAINTENANCE OF EQUIPMENT.

The average cost of repairs per locomotive and per car owned, for the year, compared with the previous year, was as follows:

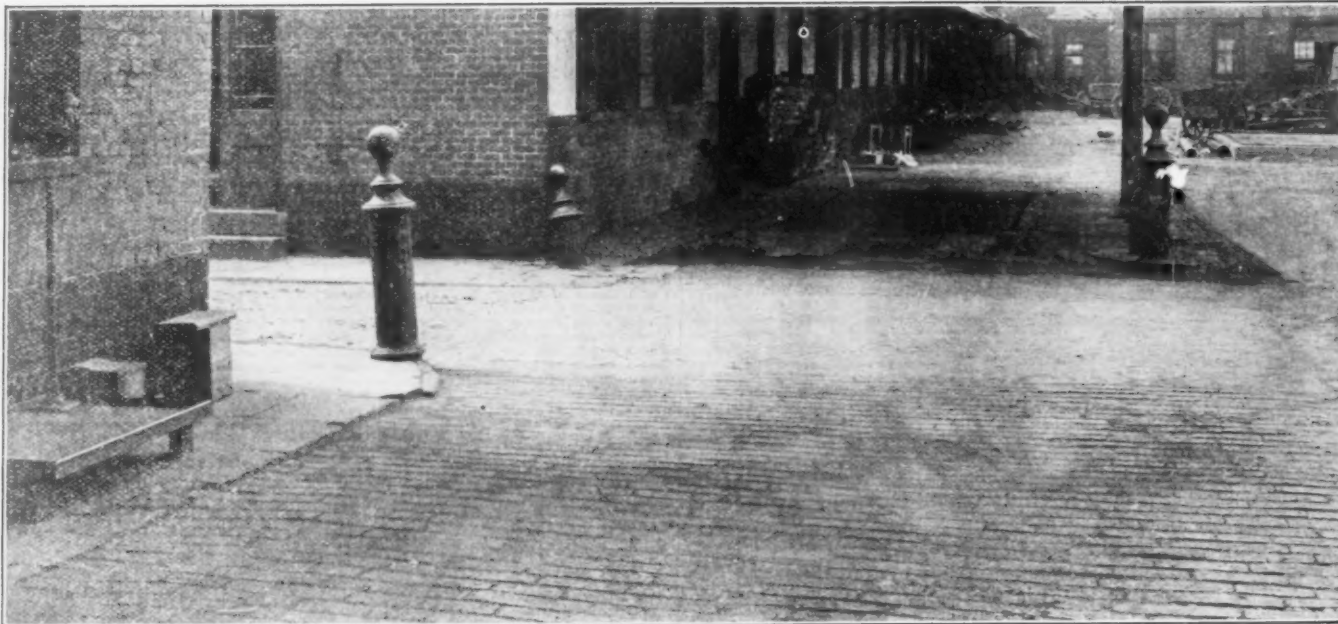
	1912.	1911.
Locomotives.....	\$1,585 44	\$1,382 27
Passenger cars.....	459 56	454 76
Freight cars.....	37 33	39 86

BALANCE SHEET, JUNE 30, 1912.

Assets.	
Property Investment:	
Road.....	\$17,207,212 33
Equipment.....	\$2,786,313 79
Less: Reserve for Depreciation.....	96,889 16
General Expenditures.....	2,689,424 63
Real Estate not used in Operation.....	75,964 55
Leased Rail.....	\$19,972,591 51
Securities of Underlying and other Companies:	152,632 75
Pledged—Bonds.....	73,227 96
Pledged—Stocks.....	\$6,406,000 00
Unpledged—Stocks.....	71,248 79
Unpledged—Stocks.....	700 00
Advances to Proprietary, Affiliated and Controlled Companies for Construction, Equipment and Betterments.....	6,477,948 79
Working Assets:	5,342,745 54
Cash.....	\$32,019,306 55
Loans and Bills Receivable.....	\$1,211,657 95
Traffic and Car Service balances due from other Companies.....	584 00
Net Balance due from Agents and Conductors.....	121,931 29
Miscellaneous Accounts Receivable.....	120,775 15
Materials and Supplies.....	173,325 95
Accrued Income Not Due.....	229,287 27
Deferred Debit Items:	1,857,541 71
Advances—	1,725 00
Temporary Advances to Proprietary, Affiliated and Controlled Companies.....	\$217 61
Working Funds.....	1,183 00
Unextinguished Discount on Securities.....	
Unextinguished Discount on Funded Debt.....	880,854 85
Special Deposits.....	135,000 00
Other Deferred Debit Items.....	119,011 38
	1,116,266 84
Capital Stock—Common.....	\$34,994,740 10
Mortgage, Bonded and Secured Debt:	\$16,000,000 00
Funded Debt—	
Mortgage Bonds:	
Norfolk Southern R. R. Co. First and Refunding Mortgage	
50-Year 5% Gold Bonds, due 1961—	\$8,644,000 00
Authenticated under Mfg.....	2,283,000 00
Held for Company by Central Traction Co.....	
Held by Public.....	\$6,381,000 00
Norfolk & Southern R. R. Co. First Mortgage 50-Year 5% Gold Bonds, due 1941 (assumed)—	
Held by the Company.....	\$316,000 00
Held by the Public.....	1,655,000 00
Norfolk & Southern R. R. Co. First Gen. Mtge. 50-Year 5% Gold Bonds, due 1951 (assumed)—	
Held by the Company.....	\$2,040,000 00
Held by the Public.....	825,000 00
Suffolk & Carolina Ry. Co. First Cons. Mortgage 5% Gold Bonds, due 1952 (assumed)—	
Held by the Company.....	\$50,000 00
Held by the Public.....	650,000 00
	700,000 00
	\$11,917,000 00
Collateral Trust Notes:	
Norfolk Southern R. R. Co. 3-Year 5% Collateral Trust Gold Notes, due January 1, 1915, having as collateral same amount for the Co.'s temporary First and Refunding Mtge. 50-Year 5% Bonds—Held by the Public.....	5,456,000 00
	17,373,000 00
Working Liabilities:	
Traffic and Car Service balances due other Companies.....	\$61,924 71
Audited Vouchers and Wages Unpaid.....	230,877 66
Miscellaneous Accounts Payable.....	51,416 67
Matured Dividends, Interest and Rents Unpaid.....	193,875 00
Accrued Liabilities Not Due:	598,094 04
Unmatured Dividends, Interest and Rents Payable.....	\$157,958 00
Taxes Accrued.....	23,747 52
Deferred Credit Items.....	181,705 52
Surplus.....	128,846 76
Contingent Liability—This Company, jointly with the Virginian Ry. Co. and the Norfolk & Western Ry. Co., guarantees the authorized issue of \$2,000,000 1st Mortgage 50-Year 4% Gold Bonds of the Norfolk Terminal Ry. Co. due May 1, 1961, of which there were outstanding at June 30, 1912, \$1,000,000	713,064 78
	\$34,994,740 10



Wood Block Pavement



Courtyard of New Orleans Gas Light Company, Showing Wood Block Pavement

A Wood Pavement That Lasted Thirty-Two Years

Thirty-two years ago the New Orleans Gas Light Company paved a portion of their courtyard with creosoted wood blocks. The courtyard was used as a driveway and has had steady wear.

It has never been repaired on account of wear and is a perfect pavement to-day. How much longer it will last without repairs no one can predict until some wood block pavement somewhere actually wears out.

Wood Blocks laid with the grain vertical cannot split or be crushed. The only effect of traffic upon them is the hammering down and matting of the end fibres of the wood. This process makes the surface so hard that, after the first year, no wear is discernible. The pavement practically makes itself traffic-proof.

Wood Block pavement is the only pavement of which this is true. Wood Block pavement is to be recommended wherever heavy traffic necessitates long-lived pavement.

Wood Block pavement is to be recommended for streets where quietness is desirable, as, for instance, in office-building districts, on residential streets and around hospitals, schools, courts, etc.

Wood Block pavement is to be recommended for the main "show streets" of towns, for silence is the greatest beauty a pavement can have.

Wood Block pavement is to be recommended for bridges, because it is the only durable light-weight pavement. Also for shop floors, track paving, court yards, private driveways, etc.

Booklet with Further Information on Request.

U. S. WOOD PRESERVING CO.,

165 Broadway, New York

